


Course File Content

Faculty : Prof. Sadhana Awate

Class:- MBA I Sem -II



Subject : (202) Financial Management

Sr. No.	Particulars	Remarks
1	Syllabus	✓
2	Teaching Plan Indicating Dates Planned for Topics and Dates of Topics Covered	✓
3	Program Educational Outcomes, PO's and Course Outcome	✓
4	Academic and Activities Calendar	✓
5	Time Table (Individual & Class Time Table)	✓
6	Class Activities Planned	✓
7	Evaluations Planned and Dates of Evaluations	✓
8	Unit wise Subjects Notes (power points)	✓
9	Question Bank for the Subject	✓
10	University Exam Old Question Papers	✓
11	Model Solution	✓
12	Subject Result	✓


(Subject Faculty)
Prof. Sadhana Awate

Checked & verified By

Name: Dr. Reena Wark



Dr. Pravin Botade




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Semester II		202 – Financial Management
3 Credits	LTP: 2:1:1	Compulsory Generic Core Course

1. **Business Finance:** Introduction to Business Finance, Meaning and Definition of Financial Management, Objectives of Financial Management- (Profit Maximization and Wealth Maximization), Modern Approach to Financial Management- (Investment Decision, Financing Decision, Dividend Policy Decision), Finance and its relation with other disciplines, Functions of Finance Manager **(3+2)**
2. **Techniques of Financial Statement Analysis:** Introduction, Objectives of financial statement analysis, various techniques of analysis viz Common Size Statements, Comparative Statements, Trend Analysis, Ratio Analysis, Funds Flow Statement & Cash Flow Statement **(10 + 2)**
3. **Working Capital Management:** Meaning of Working Capital, its components & types, Operating Cycle, Factors affecting working capital, Estimation of working capital requirement. (Total Cost Method & Cash Cost Method) **(8 + 2)**
4. **Capital Structure:** Meaning and Factors affecting Capital Structure, Different sources of finance. Concept and measurement of Cost of Capital (measurement of Specific Cost and WACC), Trading on Equity, Concept of Leverages and its types. **(6 + 2)**
5. **Capital Budgeting:** Meaning, Definition of Capital Budgeting, Time value of money. Tools of evaluation of the project based on traditional techniques and modern techniques - ARR, Payback Period, Discounted Payback Period, NPV, PI & IRR **(6+2)**

Note: Numerical Problems will be asked on following topics only—

1. Common Size Statements
2. Comparative Statements
3. Trend Analysis
4. Ratio Analysis (Calculation of ratios plus its interpretation)
5. Estimation of working capital requirement (Total Cost Method & Cash Cost Method)
6. Operating Cycle
7. Measurement of Specific Cost (Cost of Equity, Preference, Retained Earnings and Debt) and WACC
8. Capital Structure
9. Leverages
10. Capital Budgeting (ARR, Payback Period, Discounted Payback Period, NPV, PI & IRR)

Suggested Text Books:

1. Financial Management, Shashi K. Gupta and R.K. Sharma (Kalyani Publication)
2. Basics of Financial Management, V.K. Saxena and C.D. Vashist (Sultan Chand & Sons)
3. Financial Management, A Contemporary Approach, Rajesh Kothari (SAGE)
4. Financial Management, Dr. Mahesh Abale & Dr. Shriprakash Soni (Himalaya Publishing House Pvt. Ltd.)
5. Working Capital Management, Theory and Practice, Dr. P. Periasamy (Himalaya Publishing House)
6. Financial Management, I M Pandey (Vikas Publishing House Pvt. Ltd)
7. Fundamentals of Financial Management, A.P. Rao (Everest Publishing House)
8. Advanced Financial management, N.M. Vechalekar

Suggested Reference Books:

1. Financial Management, Rajiv Srivastava and Anil Misra (OXFORD University Press)
2. Financial Management, Ravi Kishore (Taxmann)
3. Financial management, V.K. Bhalla (S. Chand)

Financial Management, Jonathan Berk, Peter DeMarzo and Ashok Thampy (Pearson Publication)



MBA I SEM II
TEACHING PLAN
 (AY-2021-2022: Semester- II)

Subject : 202: Financial Management

Faculty Name: Mrs. Sadhana Awate

Class: MBA-I Sem II


% Subject Results For Last Two Years :

2019-20	
2020-21	

Lect. No.	Unit No.	Planned Dates	Topic & Contents Planned	Conducted Dates
1	1	09/5/2022	Introduction to Business Finance, Meaning and Definition of Financial Management,	09/5/2022
2	1	10/5/2022	Objectives of Financial Management- (Profit Maximization and Wealth Maximization),	10/5/2022
3	1	11/5/2022	Modern Approach to Financial Management- (Investment Decision, Financing Decision, Dividend Policy Decision),	11/5/2022
4	1	12/5/2022	Finance and its relation with other disciplines, Functions of Finance Manager	11/5/2022
5	2	17/5/2022	Format of Balance Sheet	12/5/2022
6	2	18/5/2022	Format of Income statement	17/5/2022
7	2	19/5/2022	Comparative statement	18/5/2022
8	2	23/5/2022	Common Size Statement	19/5/2022
9	2	24/5/2022	Trend Analysis	23/5/2022
10	2	25/5/2022	Ratio Analysis – All Ratios	24/5 (2 lectures)
11	2	26/5/2022	Sums on Ratio analysis	30/5 /2022
12	2	27/5/2022	Sums on Ratio analysis	30/5 (Extra Lect.)
13	2	30/5/2022	Evaluation -1 (Case Study)	1/6/2022
14	2	31/5/2022	Funds Flow Statement (Format)	3/6/2022
15	3	01/6/2022	Cash Flow Statement (Format)	6/6/2022
16	3	03/6/2022	Meaning of Working Capital, its components& types	7/6/2022
17	3	06/6/2022	Operating Cycle, - Sums	7/6/2022
18	3	07/6/2022	Factors affecting working capital	8/6/2022



19	3	08/6/2022	Estimation of working capital requirement - Total Cost Method	09/6/2022
20	3	09/6/2022	Estimation of working capital requirement - Cash Cost Method	09/6/2022
21	3	13/6/2022	Sums on working capital requirement	13/6/2022
22	4	14/6/2022	Meaning and Factors affecting Capital Structure, Different sources of finance	14/6/2022
23	4	15/6/2022	Evaluation 2 – (Test of 20 Marks)	15/6/2022
24	4	16/6/2022	Calculation of Cost of Debt	16/6/2022
25	4	20/6/2022	Calculation of Cost of Equity	20/6/2022
26	4	21/6/2022	Calculation of Cost of Preference share capital	21/6/2022
27	4	22/6/2022	Calculation of WACC	22/6/2022
28	4	23/6/2022	Sums on Capital Structure planning	23/6/2022
29	4	27/6/2022	Sums on Capital Structure planning	24/6/2022
30	4	28/6/2022	Trading on Equity concept	28/6/2022
31	4	29/6/2022	Types of Leverage – formulas	29/6/2022
32	5	30/6/2022	Evaluation 3 – (Test of 10 Marks)	30/6/2022
33	5	04/7/2022	Sums on Leverage	04/7/2022
34	5	05/7/2022	Evaluation – 4 (Project Report Presentation)	05/7/2022
35	5	06/7/2022	Meaning, Definition of Capital Budgeting	06/7/2022
36	5	07/7/2022	Time value of money – Simple interest calculation	07/7/2022
37	5	11/7/2022	Time value of money – Compound interest calculation	08/7/2022
38	5	12/7/2022	Capital Budgeting Techniques – Payback period, ARR period	11/7/2022
39	5	13/7/2022	Evaluation – 5 (Assignment)	13/7/2022
40	5	14/7/2022	Capital Budgeting Techniques – NPV and PI	14/7/2022
41	5	18/7/2022	Capital Budgeting Techniques – IRR, Discounted	18/7/2022
42	5	19/7/2022	Combined Sums of All techniques of Capital Budgeting	19/7/2022
43	5	20/7/2022	Combined Sums of All techniques of Capital Budgeting	20/7/2022
44		21/7/2022	Solving of University with model answer paper, Doubt Solving Session	21/7/2022


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Subject Faculty




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Course Outcomes:
Subject:- Financial Management

On successful completion of the course the learner will be able to

Co	COGNITIVE ABILITIES	COURSE OUTCOMES
CO202.1	REMEMBERING	DESCRIBE the basic concepts related to Financial Management, Various techniques of Financial Statement Analysis, Working Capital, Capital Structure, Leverages and Capital Budgeting.
CO202.2	UNDERSTANDING	EXPLAIN in detail all theoretical concepts throughout the syllabus
CO202.3	APPLYING	PERFORM all the required calculations through relevant numerical problems
CO202.4	ANALYSING	ANALYZE the situation and <input type="checkbox"/> comment on financial position of the firm <input type="checkbox"/> estimate working capital required <input type="checkbox"/> decide ideal capital structure <input type="checkbox"/> evaluate various project proposals
CO202.5	EVALUATING	EVALUATE impact of business decisions on Financial Statements, Working Capital, Capital Structure and Capital Budgeting of the firm



Programme Outcomes (POs):

At the end of the MBA programme the learner will possess the

- 1. Generic and Domain Knowledge** - Ability to articulate, illustrate, analyze, synthesize and apply the knowledge of principles and frameworks of management and allied domains to the solutions of real-world complex business issues
- 2. Problem Solving & Innovation** - Ability to Identify, formulate and provide innovative solution frameworks to real world complex business and social problems by systematically applying modern quantitative and qualitative problem solving tools and techniques.
- 3. Critical Thinking** - Ability to conduct investigation of multidimensional business problems using research based knowledge and research methods to arrive at data driven decisions
- 4. Effective Communication** - Ability to effectively communicate in cross-cultural settings, in technology mediated environments, especially in the business context and with society at large
- 5. Leadership and Team Work** - Ability to collaborate in an organizational context and across organizational boundaries and lead themselves and others in the achievement of organizational goals and optimize outcomes for all stakeholders.
- 6. Global Orientation and Cross-Cultural Appreciation:** Ability to approach any relevant business issues from a global perspective and exhibit an appreciation of Cross Cultural aspects of business and management.
- 7. Entrepreneurship** - Ability to identify entrepreneurial opportunities and leverage managerial & leadership skills for founding, leading & managing startups as well as professionalizing and growing family businesses.
- 8. Environment and Sustainability** - Ability to demonstrate knowledge of and need for sustainable development and assess the impact of managerial decisions and business priorities on the societal, economic and environmental aspects.
- 9. Social Responsiveness and Ethics** - Ability to exhibit a broad appreciation of the ethical and value underpinnings of managerial choices in a political, cross-cultural, globalized, digitized, socio-economic environment and distinguish between ethical and unethical behaviors & act with integrity.
- 10. LifeLong Learning** – Ability to operate independently in new environment, acquire new knowledge and skills and assimilate them into the internalized knowledge and skills.



SINHGAD INSTITUTE OF BUSINESS ADMINISTRATION AND COMPUTER APPLICATION

SIBACA, Lonavala

Academic Calendar 2021-22:Semester II/IV

MONTH	DATES	EVENTS / ACTIVITIES	COORDINATOR
May-22	9	Sem II Students Reporting	All Faculty
	10	Commencement of Lectures	All Faculty
	12	Guest Lecture on Career Opportunities in MBA Specializations	Dr. Pradnya Bhandare and Dr. Reena Nath
	13	External SIP VIVA_VOCE Sem III	Dr. Bharati Jagdale
	18	Traffic Awareness Programme	Dr. Reena Nath/Dr. Rajendra Bhadale/ Prof. Nilesh Patil/ Prof. Sadhana
	25	Guest Session on IPR	Dr. Pradnya Bhandare, Dr. Reena Nath, Prof. Sadhana Awate
	27	Brand Logo Competition/Brand Quiz	Dr. Rajendra
	31	1st Evaluation (CIE)	All Faculty
Jun-22	1	Guest Session on Human Rights	Dr. Krishna Sharma
	3	Local Industrial Visit (Parle-G)	Dr. Bharati Jagdale/ Prof. Nilesh Patil
	5	Environmental Day	Mr. Satish Kamble
	6	Hariyali (Tree Plantation Programme)	All Faculty
	9	Khari Kamai	All Faculty
	13	Resume Building Workshop (Dr. Jayesh Minase - Dean, Central Placement Cell)	Dr. Bharati Jagdale
	15	Days Celebration	Dr. Bharti Jagdale & Dr. Pradnya Bhandare
	17	2nd Evaluation (CIE)	All Faculty
	21	International Yoga Day	Dr. Bharati
	24 - 30	3rd Evaluation (CIE)	All Faculty
Jul-22	6	Business Plan	Dr. Krishna Sharma/ Prof. Nilesh Patil
	11	3rd Evaluation (CIE)	All Faculty
	13	Bhatkani	Dr. Rajendra Bhadale / Dr. Krishna Sharma
	19	Guest Lect on Udyojak-An Entrepreneurship Development Program	Dr. Krishna Sharma
	21	Alumni Meet	Dr. Bharati Jagdale/ Prof. Nilesh Patil
	22-25	Remedial Classes and Pending Evaluation	All Faculty
	25-29	Final Internal Exam	All Faculty

Note : Holiday list may change as per the STES circular

Evaluation will be adjusted as per the dates of SPPU online examination

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Sinhgad Institute of Business Administration & Computer Applications, Lonavala
TIME-TABLE-- 2021-22 **MBA SEM II** **DIVISION - FINANCE**
ROOM NO : 209

Time	Monday	Tuesday	Wednesday	Thursday	Friday
08.30 am -09.25 am	202-FM				205-FMBO
09.25 am -10.20 am		202-FM			404 - CT & CF
10.20 am -10.35 am			Short Recess		
10.35 am -11.30 am	403- FL	205-FMBO	403- FL	202-FM	206-PFP
11.30 am -12.20 pm			202-FM	404 - CT & CF	
12.20 pm- 01.20 pm			Lunch Break		
01.20 pm- 02.10 pm	404 - CT & CF			205-FMBO	403- FL
02.10 pm- 03.05 pm		404 - CT & CF		403- FL	
03.05 pm- 03.10 pm			Short Recess		
03.10 pm- 04.05 pm		206-PFP	205-FMBO	206-PFP	
04.05 pm- 05.00pm	206-PFP	Case Study	STP		

Summary:

Subject	Faculty	Subject	Faculty
201-GC- Marketing Management	Prof. N. Patil	207 -UL-Contemporary Frameworks in Management	Dr. Krishna Sharma
202-GC- Financial Management	Prof. Sadhana Awate	209-UL- Startup & New Venture Management	Dr. Reena Nath
203 -GC-Human Resource management	Dr. Krishna Sharma	210-UL- Qualitative Research Management	Dr. B. Jagdale
204 -GC-Operations & Supply Chain Mgmt	Dr. R. Bhadale	214-IL- Industry Analysis & Desk Research	Dr. Pravin Bodade
205-SC- Financial Market & Banking Operations	Prof. Sadhana Awate	217-IL- Securities Analysis & Portfolio Management	Dr. Anil Nagtilak
206-SC-Personal Financial Planning	Prof. Sadhana Awate	223 -IL-Fundamentals of Life Insurance – Products & Underwriting	Dr. Anil Nagtilak



Dr. Reena Nath
Time Table Incharge

Prof. Sadhana Awate

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Sinhgad Institute of Business Administration & Computer Applications, Lonavala
TIME-TABLE-- 2021-22

MBA SEM II

DIVISION - FINANCE

ROOM NO : 209

Time	Monday	Tuesday	Wednesday	Thursday	Friday
08.30 am -09.25 am	202-FM	201- MM	204-OSCM	203-HRM	205-FMBO
09.25 am -10.20 am	201- MM	202-FM	203-HRM	201- MM	204-OSCM
10.20 am -10.35 am	Short Recess				
10.35 am -11.30 am	204-OSCM	205-FMBO	201- MM	202-FM	206-PFP
11.30 am -12.20 pm	207-CFM	204-OSCM	202-FM	209-SNV/M	210-QRM
12.20 pm- 01.20 pm	Lunch Break				
01.20 pm- 02.10 pm	203-HRM	203-HRM	210-QRM	205-FMBO	207-CFM
02.10 pm- 03.05 pm	214-IADR	217-SAPM	217-SAPM	214-IADR	223 - FLIPU
03.05 pm- 03.10 pm	Short Recess				
03.10 pm- 04.05 pm	209-SNV/M	206-PFP	205-FMBO	206-PFP	
04.05 pm- 05.00pm	206-PFP	Case Study	STP	223 - FLIPU	

Summary:

Subject	Faculty	Subject	Faculty
201-GC- Marketing Management	Prof. N. Patil	207 -UL-Contemporary Frameworks in Management	Dr. Krishna Sharma
202-GC- Financial Management	Prof. Sadhana Awate	209-UL- Startup & New Venture Management	Dr. Reena Nath
203 -GC-Human Resource management	Dr. Krishna Sharma	210-UL- Qualitative Research Management	Dr. B. Jagdale
204 -GC-Operations & Supply Chain Mgmt	Dr. R. Bhadale	214-IL- Industry Analysis & Desk Research	Dr. Pravin Bodade
205-SC- Financial Market & Banking Operations	Prof. Sadhana Awate	217-IL- Securities Analysis & Portfolio Management	Dr. Anil Nagtilak
206-SC-Personal Financial Planning	Prof. Sadhana Awate	223 -IL-Fundamentals of Life Insurance – Products & Underwriting	Dr. Anil Nagtilak

Richard Dr. Reena Nath.
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TIME-TABLE- 2021-22 MBA SEM IV SPECIALIZATION - Finance

ROOM NO : 202

Time	Monday	Tuesday	Wednesday	Thursday	Friday
08.30 am -09.25 am	401-EPM	401-EPM	401-EPM	401-EPM	412- SCM
09.25 am -10.20 am	402- IEBE	402- IEBE	402- IEBE	402- IEBE	404 - CT & CF
10.20 am -10.35 am	Tea Break				
10.35 am -11.30 am	403- FL	409- FIS	403- FL	408- CSR	412- SCM
11.30 am -12.25 pm	405- GSM	405- GSM	4043403	404 - CT & CF	409- FIS
12.25 pm- 01.20 pm	Lunch Break				
01.20 pm- 02.10 pm	404 - CT & CF	404 - CT & CF		Library	403- FL
02.10 pm- 03.05 pm				403- FL	
03.05 pm- 03.15 pm	Tea Break				
03.10 pm- 04.05 pm					
04.05 pm- 05.00pm		Case Study	STP		

Summary:

Subject	Faculty	Subject	Faculty
401- GC- Enterprise Performance management	Dr. B. Jagdale	405- GE- UL - Global Strategic Management	Dr. B. Jagdale
402-GC- Indian Ethos & Business Ethics	Dr. R. Bhadale	408- GE- UL - Corporate Social Responsibility &	Dr. B. Jagdale
403- SC - Financial laws	Prof. Sadhana Awate	409- SE- IL - Fixed Income securities	Dr. Anil Nagtilak
404- SC - Current Trends & Cases in Finance	Prof. Sadhana Awate	412- SE- IL- Strategic cost management	Dr. Anil Nagtilak

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Class Activity

1) Paper Planes

Want to find out if your students are up to date with the lessons? The paper planes game is a great way to make learning fun. Ask each student to write a question from experience taught the previous day on a piece of paper.

Divide the class into two teams and ask each of them to make planes out of those papers. Now the groups are to chuck their aircraft at each other. The students pick up the airplanes and answer the questions.

2) Group Discussion :- Current Events - Several Topics.

- Students can find current events, cases, or newspaper articles and remove the ending/outcome from the article.
- We can break the class into teams and have them evaluate it and decide how the situation could be resolved using different leadership techniques. For example, how would a scientific manager handle this situation? Or would a telling or participative manager work best here? Another great event to review is the NASA Challenger issue and an opener to talk about Group Think.
- For my business law class I like finding strange law cases, remove the decisions, then have the students use their knowledge of the materials they were asked to read prior to class to identify how the cases were decided.
- For a great activity in business communications I will find the same news article on Fox News and on MSNBC (for example) and identify the differences. This is also a good way to demonstrate how to be critical when evaluating online information.



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Concurrent Evaluation Parameters

Academic Year 2021-2022

Name of Faculty Member :- Prof. Sadhana Awate

Subject Name & Code :- 202 - Financial Management

MBA I Semester – II

Sr. No	Evaluation Parameter	Date	Reevaluation for slow learners	Marks (50)
1	Assignment	13/7/2022	18/7/22	10
2	Class Test – 1	15/6/2022	21/7/22	20
	Class Test – 2	30/6/2022		
3	Case Study evaluation	01/6/2022	-	10
4	Project on Ratio Analysis	04/7/2022	20/7/22	10
				50

Checked / Verified by

Name




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MBA I SEM- II
202 Financial Management

Sr. No.	Seat No.	Name of Students	20 CT	10 assign	10 Project	10 Case study	50 Final marks
1	34816	KIRAN SHIVAJI AVHAD	17	8	8	9	42
2	34817	PRATIK NANDKUMAR PATIL	16	7	7	8	38
3	34818	KUNAL BALU TUNGE	17	8	8	7	40
4	34819	ABHISHEK KISHOR RAMTEKE	19	9	9	9	46
5	34820	PRAMOD RAYCHAND DANGADE	18	8	8	8	42
6	34821	KAHIRA SURVE	16	8	8	8	40
7	34822	KESHAV VIRENDER CHOUDHARY	15	8	8	8	39
8	34823	MARUTI BHASKAR BOORA	16	8	8	8	40
9	34824	NEHAL BALU SALVE	15	7	7	7	36
10	34825	ROHIT DILIP SALVE	16	7	7	7	37
11	34826	SUMIT GAUTAM SALVE	15	7	7	7	36
12	34827	GANESH SUBHASH SHINDE	18	8	8	8	42
13	34828	HRITIK PRADEEP SONARIKAR	18	8	9	8	43
14	34829	RUTWIK MILIND SURYAWANSHI	18	8	8	8	42
15	34830	AKASH AVINASH JAMDADE	17	9	8	8	42
16	34831	PRATIK LAXMAN ANGRE	18	9	8	8	43
17	34832	SAMIKSHA RAJAN BHOIR	18	8	8	9	43
18	34833	BHUSHAN SURESH KHADSE	18	8	9	8	43
19	34834	SUMEET VILAS GORE	19	9	9	9	46
20	34835	DIPALI AVINASH HIWARKAR	19	9	10	9	47
21	34836	RUSHIKESH FULCHAND JADHAV	18	9	8	9	44
22	34837	MANJIRI SANJAY KAMBLE	17	8	8	7	40
23	34838	SUYASH SUDAM KANGNE	19	9	10	9	47
24	34839	AKSHAY ASHOK KOLGE	18	8	8	9	43
25	34840	SNEHAL KASHINATH KURKUTE	18	9	9	8	44
26	34841	PRANALI ANIL LOHAR	18	9	9	8	44
27	34842	GAURI SANJAY MORE	18	9	8	9	44
28	34843	KRUTIKA BHALCHANDRA PATIL	18	9	9	9	45
29	34844	PRERNA PRAMOD KHANDAGALE	19	9	10	9	47
30	34845	NAMRATA BALKISHAN RAPELLI	19	9	10	9	47
31	34846	ANAND DHONDIRAM RATHOD	17	9	8	8	42
32	34847	SAGARKUMAR MOHAN RANA	19	9	10	9	47
33	34848	SHAHROKH KHAN	18	9	9	9	45
34	34849	ADITYA SUDHAKAR SHERKHANE	18	9	9	9	45
35	34850	SHIVPRASAD SURYAKANT KULKARNI	17	8	8	7	40
36	34851	SHUBHANGINI DILIP YEOLE	19	9	10	9	47
37	34852	TEJAS RAJESH GHOTKAR	18	9	8	9	44
38	34853	EKTA ANIL TOPE	18	9	9	9	45
39	34854	AMRUTA MAHADEV GHOLVE	15	7	7	7	36
40	34855	ASHA AMAR GURWANI	18	9	9	9	45
41	34856	PRATIKSHA CHANDRAKANT EKAMALLI	15	8	8	7	38
42	34857	MANSI RAJESH MOHITE	15	6	6	6	33
43	34858	JYOTI HARIBHAU MORE	15	8	8	7	38
44	34859	PURVAJA GAJANAN UPLECHWAR	18	9	8	9	44



45	34860	SANIKA SUNIL NANDE	15	8	8	7	38
46	34861	AMIT KUSHABA SHIVSHARAN	14	6	7	6	33
47	34862	SHRUTI SHRIKRISHNA BACHATE	19	9	9	8	45
48	34863	SUNNY SUNIL JANBANDHU	18	9	9	8	44
49	34864	PRACHI RAM TAKLE	18	9	9	8	44
50	34865	AJAY AVINASH BANKAR	15	8	7	7	37
51	34866	SAMRAT MOHAN BANSODE	18	9	9	9	45
52	34867	SOHEL SHAKIRHUSAIN DESHMUKH	18	8	8	8	42
53	34868	PRASHANT CHANDRAKANT	14	8	8	8	38
54	34869	NAYAN SURYAMANI RANGARI	15	8	7	7	37
55	34870	SHYAM SANJAY DAHAGANE	19	9	9	9	46



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Assignment Questions

SINHGAD INSTITUTE OF BUSINESS ADMINISTRATION AND COMPUTER APPLICATION

Semester II 202 – Financial Management

Q1. From the following Balance sheet of XYZ Ltd. Prepare Vertical Balance Sheet and calculate the following ratios

- a) Current Ratio
- b) Liquid Ratio
- c) Absolute Liquid Ratio
- d) Current Ratio to Fixed Assets Ratios
- e) Debt to Equity Ratio
- f) Proprietary Ratio
- g) Capital Gearing Ratio
- h) Fixed Assets Ratio

Balance sheet as on 31st March 2021

Liabilities	Amount (Rs)	Assets	Amount (Rs.)
Equity Share Capital	1200000	Goodwill	400000
7% Preference Share Capital	600000	Plant & Machinery	800000
General Reserve	300000	Land & Building	600000
P & L A/c	140000	Furniture	100000
Prov. For Taxation	180000	Inventories	800000
Bills Payable	130000	Bills Receivable	50000
Bank Overdraft	30000	Debtors	200000
Creditors	100000	Bank	200000
13% Debentures	500000	Investment (short term)	30000
	3180000		3180000

Q2. Raman Ltd. Had an annual sales of RS. 40000 units at Rs. 100 per unit. The company works for 52 weeks in the year. The cost details of the company are given below:

Particulars	Unit cost (Rs.)
Raw Material	40
Labour	20
Overheads	10
Total Cost	70
Profit per unit	30
Selling price per unit	100

- a) The company has the practice of storing raw materials for 6 weeks requirements.
- b) The wages and other expenses are paid after a lag of 4 weeks
- c) Further the debtors enjoy a credit of 8 weeks and company gets a credit of 4 weeks from suppliers
- d) The processing time is 4 weeks and finished goods inventory is maintained for 2 weeks.

From the above information prepare a working capital estimates allowing for a 15% contingency



Q3. The cash flow streams for two alternatives investments ABC and XYZ are: **Calculate**

- 1) Pay Back period
- 2) Net Present Value (NPV) using 11% discount rate
- 3) Benefit cost ratio (PI) using 11% discount rate
- 4) Discounted payback period
- 5) Which would you choose and why?

Year	ABC	XYZ
0	(200000)	(210000)
1	50000	80000
2	80000	60000
3	100000	80000
4	80000	60000
5	60000	80000

Q4. What is Financial Management and explain the objectives and scope of Financial Management.

Q5. State the components, Types and Factors affecting Working Capital.



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Class Test

Subject :- Financial Management (202)

Class :- MBA I SEM II

Marks :- 20 Marks

Test - 01

Date :- 15/6/2022

Time :- 30 Min

From the following balance sheet of Ram Ltd. as at 31st March 2020 and 31st March 2021, prepare Comparative Balance Sheet and also offer your comment thereon

Liabilities	31/3/2020	31/3/2021	Assets	31/3/2020	31/3/2021
Equity Share Capital	120000	160000	Land and Building	100000	150000
Prefered Share Capital	60000	95000	Plant & Machinery	40000	45000
Reserve & Surplus	30000	35000	Stock	60000	82000
Profit & Loss A/c	18000	20000	Debtors	40000	45000
Bank Overdraft	25000	45000	Bills Receivable	10000	30000
Creditors	25000	30000	Prepaid Expenses	6000	8000
Provision for tax	15000	22500	Cash at Bank	40000	58500
Proposed Dividend	8000	20000	Cash in Hand	5000	9000
Total	301000	427500	Total	301000	427500



SINHGAD TECHNICAL EDUCATION SOCIETY'S
SINHGAD INSTITUTE OF BUSINESS ADMINISTRATION AND COMPUTER APPLICATION

Class Test - 02
Subject :- Financial Management (202)

Class :- MBA I SEM II
Marks :- 10 Marks

Date :- 30/6/2022
Time :- 30 Min

A proforma Cost sheet of a company is as follow

Elements of cost	Rs. Per unit
Raw Material	80
Direct Labour	30
Overheads	60
Total Cost	170
Profit	30
Selling Price	200

The following particulars are available:

- 1) Raw Materials are in stock on an average for one month.
- 2) Materials are in process, on an average for half a month.
- 3) Finished goods are in stock on an average for one month.
- 4) Credit allowed by suppliers is one month. Credit allowed to debtors is two month.
- 5) Lag in payment of wages is 1 ½ weeks. Lag in payment of overheads is one month.
- 6) One fourth of the output is sold against cash. Cash on hand is to be maintained at RS. 25000
- 7) You are required to prepare a statement showing the working capital needed to finance a level of activity of 104000 units of production.
- 8) Provide 15% of net working capital for margin of safety.
- 9) You may assume that the production is carried on evenly throughout the year.
- 10) Wages and overheads accrue evenly throughout the year and assume 52 weeks in a year.



Subject :- Financial Management.
Topic :- Unit No. 3. / Working Capital.

Richard Ivey School of Business
The University of Western Ontario

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W12346

Q. BBC PVT. LTD. AND WORKING CAPITAL CHALLENGES

Nimisha Kapoor and Professor Sandeep Goel wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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Version: 2013-05-16

In January 2012, Arpit Agarwal, managing director of chemical manufacturing company BBC Pvt. Ltd., was contemplating the alternatives that he could explore before the company proceeded with its plan to sign a contract with Indian Railways (IR). Agarwal had been a leading member of BBC since its beginnings in 2004. BBC now had an advance acceptance document confirming its contract with IR, yet the company was suffering from a lack of working capital due to a combination of extending liberal credit to its customers and repaying debts too quickly. Therefore, Agarwal was not sure what the company's next step should be.

BBC

BBC Pvt. Ltd. was an Indian chemical manufacturing company established in 2004. The company's registered office was in Bangalore and its manufacturing plant was in Lucknow. BBC was managed by two directors, Agarwal and Mukesh Kumar. Kumar was a science graduate and Agarwal had a degree in management.

BBC was categorized as a small-scale industry under the domain of chemical manufacturing. It produced and sold stable bleaching powder using the raw material liquid chlorine. Since both the raw material and the end product were highly toxic BBC was also classified as a hazardous industry.¹ A license from the Government of India's Department of Industrial Policy & Promotion was required in order to store the cylinders of liquid chlorine. The company usually procured its raw material from the Sonbhadra district in Uttar Pradesh. The price of this raw material could fluctuate wildly, from as low as INR10 per tonne to as high as INR10,000 per tonne. This wide price range was based upon suppliers' capacity to store and sell liquid chlorine within the limitations of licensed quantities. Any raw material exceeding these licensed quantities had to be sold at lower a price.

¹ According to the Environment (Protection) Act, 1986 any industry handling or dealing with hazardous substance which may cause adverse effects on the health of the people and the environment may be put under the category of hazardous industry. Thus, industries relating to the products of chemicals petroleum fertilizer, leather highly inflammable liquid gases etc. can be classified as hazardous industries. The Environment (Protection) Act, 1986, Ministry of Environment and Forests, www.envfor.nic.in/legis/env/eprotect_act_1986.pdf, accessed November 15, 2012.



Stable bleaching powder could be manufactured through one of two techniques: absorption or adsorption. The product manufactured by the absorption technique was of better quality than the product manufactured by the adsorption technique. BBC used adsorption, which meant that its product was of an inferior quality compared to the products of its competitors. The company's main competitors were industry giants like the Aditya Birla Group, the DCM Group, Grasim Industries Limited, etc.; however, these companies were also BBC's suppliers of liquid chlorine.

Because of the more affordable (but lower quality) adsorption technique used in production, BBC was able to reduce its operating costs with respect to installation of equipment, maintenance and electricity expenditure. Despite producing a bleaching powder of inferior quality, the use of adsorption allowed the company to enjoy a favourable market share due to the cost advantage BBC was able to pass on to its customers.

BBC's customers could be divided into two broad categories: government accounts and private accounts. The government placed orders whenever there was a demand in any of its departments. Private contracts were negotiated according to industry factors such as the reputation/standing of the involved party, past dealings, size of the order, etc. Orders from private customers were usually smaller than government orders and the BBC's customer base was largely comprised of private accounts.

The company enjoyed a credible position with its bankers. Its main bank was Union Bank of India, a nationalized bank. BBC had a cash credit limit of INR2.5 million, which had been fully utilized. During a meeting with the bank manager regarding the IR contract, Agarwal could sense the manager's reluctance to extend a fresh line of credit to BBC. The bank manager mentioned that the interest on the loan required to complete the contract with IR would be 14.5 per cent; the offer was against a pledge of share certificates for an existing loan with the bank, in light of the fact that BBC was carrying existing unsecured loans that resulted in interest payments of more than INR600,000 annually.

WORKING CAPITAL MANAGEMENT

BBC had been following a conservative approach to working capital, as reflected in its high level of net working capital — more than INR4.2 million in fiscal year 2010/11 (see Exhibit 1).

The net working capital of the company had always remained positive, as reflected in its balance sheet (see Exhibit 1). BBC's assets were more than 10 times its liabilities. These assets were mostly in the form of inventories and accounts receivable. However, trade credit of the firm had become a major liability. The company's management had been very conservative and traditional with respect to repaying loans before the credit period; from 2009 to 2011, BBC's liquid-asset-to-total-asset ratio ranged between 62 and 66 per cent — whereas the industry benchmark was 30 per cent.

BBC's inventory could be categorized into three groups: raw materials, finished goods and packing materials. From 2009 to 2011, inventory in all three of these categories had risen significantly, increasing the total inventory by almost 85 per cent. Raw material and packing material were valued at cost on a first-in-first-out (FIFO) basis. Finished goods were valued at cost or at net realizable value — whichever was less.

Although such high levels of inventory eliminated the possibility of disruptions in manufacturing due to a stockout, it had led to wastage of BBC's working capital. A large stock of finished product stored in the company's premises had long been a cause of concern for Agarwal (see Exhibit 2). He knew that the company's sales had gradually decreased. Immediate action was required as decreased sales would negatively affect the profitability of the company and BBC's return on capital employed in the future.

BBC's debtors had remained more or constant with minor fluctuations. The credit periods on the loans ranged from 15 days to almost two years. The largest amount due on a single account was INR4 million. Debtors/receivables turnover ratio of the company had ranged from 2.9 to 3.2 times for the last three financial years. Despite this, BBC continued to extend liberal credit to new accounts.

The company had been maintaining adequate levels of cash but these levels would not be sufficient for additional orders like the proposed contract with IR. The cash and bank balance in BBC's balance sheet was inclusive of a fixed deposit maintained with the bank. The company also indulged in future commodity trading. The profits from these activities were apparent in BBC's profit and loss statement (see Exhibit 3).

BBC had been too quick in paying back its creditors. This had affected the company's liquidity: the longer the repayment period, the lower the net present value of the payment and the higher the value to the firm. The company also maintained a cash credit limit of INR2.5 million with Union Bank of India.

THE CONTRACT WITH INDIAN RAILWAYS

Operations were running relatively smoothly at BBC but Agarwal knew that there was an urgent need to upgrade the company in order to make it a truly competitive market player. The IR contract could prove to be such an upgrade, and it had therefore been an aspiration of Agarwal's since 2011. He had registered his company for all three divisions of Indian Railways in the northern part of India (Northern Railways, North Eastern Railways and North Central Railways). This contract would open the gates between BBC and IR for long-term business, and could potentially act as a stepping stone for BBC to become the preferred supplier of bleaching powder for other big players in the industry as well; however, the contract would be a challenge and would require a professional team working to make BBC eligible. Agarwal desperately needed a manager who could handle the administration and official correspondence of this account efficiently, as well as monitor operations along with the floor supervisor.

As part of the contract, IR was demanding an onsite office, a warehouse and a workshop within the BBC factory premises. In addition, the document of advance acceptance clearly outlined proposed quarterly onsite inspections. These inspections would have to be conducted at the factory premises before any lot was dispatched to IR. Furthermore, establishing an onsite IR office would cost a onetime expenditure of approximately INR200,000, as well as an increase in administrative costs.

The company had to put its stock in a new warehouse as part of the proposed contract. As of January 2012, BBC did not have any warehouse that met the required safety norms. All materials, including spare parts, raw material, packaging material and finished products, were kept in a semi-covered storage area within the factory premises; this often led to losses due to deterioration in the quality of material. The approximate cost of building a new warehouse would be INR500,000.

There was also an urgent need to create a separate workshop within the factory for safety and maintenance. Since BBC's manufacturing process involved various hazardous chemicals, maintenance of the existing machinery was a crucial activity. The workshop could be used to repair rusted or worn-out machine parts that were employed in the manufacturing. Certain critical parts had to be repaired regularly. Having a separate workshop exclusively for such activities would be very helpful in daily operations of the factory. The company estimated an expenditure of approximately INR500,000 for establishing such a workshop.

Above all, BBC needed to maintain adequate cash reserves to meet all of its payments and continue its usual production activities without any interruption. The total amount required for the upgrade — INR1.2



million — was beginning to worry Agarwal. BBC had already reached its cash credit limit of INR2.5 million and its recoverables were blocked in the form of either inventories or receivables. In financial year 2010/11, the company had to pay more than INR640,000 in financial charges and interest. Agarwal regretted his previous decision to avoid putting BBC's money in short-term investments, which could have been a source of funding for the upgrade that the IR contract would require. Retrospectively, he realized that BBC had been shortsighted in extending liberal credit to its customers and being more prompt in repaying debts than business demanded.

THE WAY FORWARD

BBC was able to attain many orders and manufacture its product at a cost much lower than its competitors; this fact reassured Agarwal, although he knew that there were issues that needed immediate action. Agarwal was aware that BBC's gross block was continuously decreasing and the company was therefore shrinking — rather than growing — at a rapid rate.

Agarwal knew that in order to complete the contract with IR, BBC would require a significant upgrade by December 2012. How could the finances required for this upgrade be secured? Should Agarwal seek to improve BBC's working capital management or pursue complete financial policy restructuring?

Nimisha Kapoor and Professor Sandeep Goel are from MDI, Gurgaon, India.



Exhibit 3

BBC PROFIT AND LOSS STATEMENT — 2009-2011

	2011	2010	2009
Income			
Sales	9,544,409	8,529,838	12,539,108
Other income	602,873	176,603	250,296
Increase/ Decrease in Stock	-134,040	335,549	-133,827
Total	10,013,242	9,041,991	1,265,577
Expenditure			
Raw Material Consumed	4,982,486	3,412,916	5,340,943
Manufacturing Expenses	3,434,866	3,699,344	4,765,355
Directors Remuneration	360,000	432,000	360,000
Other Expenses	223,791	451,052	935,404
Depreciation	270,798	324,757	355,292
Interest & Finance Charges	641,252	628,315	674,905
Total	9,913,194	8,948,385	12,431,899
Profit Before Tax	100,048	93,605	223,676
Profit After Tax			
Add: Transfer from previous year Balance Sheet	370,841	307,736	163,044
Provision for Income Tax	30,900	30,500	57,000
Balance carried to Balance Sheet	439,990	370,841	307,736

Source: BBC Pvt. annual reports, 2009-2011.



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Exhibit 1

BBC BALANCE SHEET — 2009-2011

	2011	2010	2009
Sources of funds			
Shareholders funds			
Share capital	950,000	950,000	950,000
Reserve & surplus	439,990	370,841	307,736
Loan Fund			
Secured loan	180,345	1,284,237	1,237,475
Unsecured loan	5,018,221	4,603,476	4,223,011
Total	6,588,557	7,208,556	6,718,222
Application of Funds			
Fixed assets			
Gross Block	2,621,861	2,944,618	3,103,368
Less: Depreciation	270,798	324,757	355,292
Net Block	2,351,064	2,619,861	2,748,076
Assets, Loans & Advances			
Inventories	870,146	740,749	322,848
Sundry debtors	2,948,850	2,936,732	3,355,773
Cash & Bank Balance	453,079	815,640	554,800
Loans & Advances	252,199	356,636	272,211
Total	4,524,274	4,849,757	4,505,632
Less: Liabilities			
Liabilities	130,166	135,348	363,486
Provisions	156,615	125,715	172,000
Total	286,781	261,063	535,486
Net Assets	4,237,493	4,588,694	4,047,146
Total	6,588,557	7,208,556	6,718,222

Source: BBC Pvt. annual reports, 2009-2011.

Exhibit 2

VALUATION OF INVENTORIES — 2009-2011

	2011	2010	2009
Inventories	870,146.2	740,749	322,848
Raw Materials	432,071	166,573	149,924
Packing Material	85,915.2	87,976	5,624
Finished Goods	352,160	486,200	167,300

Source: BBC Pvt. annual reports, 2009-2011.



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CASE STUDY - BBC PVT. LTD

Case Overview:

This case of working capital challenges of BBC Pvt. Ltd. , a small scale industry producer and seller of bleaching powder. This case intended to teach first year students the concept and importance of the working capital management in the business for survival as well as for long term growth.

BBC has followed the traditional approach to working capital Management. Its current Assets are more than current liabilities. The company repays debt before the credit period but liberal credit policy for debtors. It extends credit sales for large periods and its large inventory in the form of raw material and finished goods. As result of this excessive blockage of working capital.

In 2012 the company bid on a contract with Indian railway. For that company need to do up gradation immediately. For Improvement Company require more fund for an investment. Mr. Agarwal needs to make decision about how to secure adequate funds for the upgrade that BBC needs in order to fulfill its promising contract.

The case stress importance of working capital Management in a business for its short term survival and long term growth. This case used to develop insight with respect to working capital management.

Learning Objective

To make the student understand basic concept of working capital and importance of Working capital, various component of working capital, various sources of working capital finance.

Pedagogy

The Objectives of this case would be achieved by means of lectures and classroom discussions of case study. Case materials and other course related articles are given well in advance. Before conducting case study in the classroom theory part will be covered so that student can understand the various concepts related to the case Study.

PowerPoint present will be to make better understanding of the problems and conditions given in the case.



Case Objectives:

1. To understand concept and importance of working capital.
2. To understand component of the working capital
3. To study various Sources of working capital finance to achieve organization objective
4. To study various strategies for effective receivables management, payables management, cash management and inventory management.

Following Points discussed in the before conducting the case:

1. Meaning and definition of working capital
2. Importance of working capital.
3. Components of working capital
4. Concept of optimum working capital finance
5. Factors affecting on working capital
6. Discussion on format of working on showing requirement of working capital
7. Sources of short term and long term working capital finance.
8. Strategies for effective inventory management
9. Strategies of effective cash management
10. Strategies for effective receivables management.
11. Strategies for effective account payables.

Case Facts:

- BBC Pvt Ltd . Established – 2004
- Registered office in – Bangalore ,Manufacturing Plant – Lucknow
- Directors – Two
 - Mr. Agarwal (Management Degree)
 - Mr. Mukesh Kumar (Science Graduate)
- Small Scale Industry - Domain of Chemical Manufacturing ,Hazardous Industry
 - Product : Bleaching powder
 - BBC Also indulged in Commodity Trading (Other Income)
- Raw Material used for production : Liquid Chlorine
 - Liquid Chlorine
 - Procurement From Sonbhadra District (U.P.)
 - Fluctuating Price (Low as Rs.10 Per tonne to Rs.10000 Per tonne)



- Suppliers -: Aditya Birla Group , DCM Group ,Grasim Industris Ltd.
- Manufacturing Techniques for Bleaching powder
 - Absorption
 - Adsorption

Technique use by BBC - BBC use Adsorption technique which mean that the quality of product is Inferior as compare to competitors. Due to this Technique company Was able to reduce operating Cost (Installation of Equipment , Maintenance & electricity)

- Company Market share : Favorable Market Share (Because of Cost Advantage)
- Main Competitors :- Aditya Birla Group , DCM Group ,Grasim Industris Ltd. etc.
- Customers
 - Government
 - Large Orders as per demand in the department
 - Private
 - Large Customers but orders are less than Government Orders
- Bank for transaction - Union BOI
- Working Capital Approach: BBC Use Conservative working capital Approach
 - In case of Conservative Approach a large investment in current assets resulting in a high liquidity level.
 - It involves using long term debt and equity to finance non-current assets and some current assets as well.
 - Firms that use this approach have a large amount of working capital and thus relatively face lower risks.
 - However, long term financing is more expensive than short term financing.
- Working Capital Position of BBC :
 - Positive working capital
 - High Level of Working Capital (Net) – more than Rs.4.2 million in fiscal year 2010-11
 - High Level of Inventory
 - Eliminate possibility of stock out situation



- It had led to wastage of working capital
 - Large stock of finished goods stored in the co. premises
 - Debtors – more or constant
 - Debtors Turnover Ratio – Range from 2.9 to 3.2 times (from last Three financial Years)
 - The Largest amount due on a single account was Rs.4 million
 - BBC extend credit to new account
 - Quick repayment of creditors – Lower the NPV of Payment and High Value of the Firm but affect on Companies liquidity
 - The Cash and Bank balance - Fixed deposit maintain with bank
- Sales position :
 - Co. sales had decreased gradually
 - decreased sales affect on profitability and ROCE of the company in future
 - Debtors – more or constant
 - Credit period on the loan – ranged from 15 days to 2 Year.

Problem In the Company :

- Debtors Turnover Ratio – Range from 2.9 to 3.2 times (from last Three financial Years)
- The Largest amount due on a single account was Rs.4 million
- BBC extend credit to new account
- Quick repayment of creditors – Lower the NPV of Payment and High Value of the Firm but affect on Companies liquidity
- Adequate Level of Cash had been maintaining but these level would not be sufficient for Proposed Contract With Indian Railway
- Mr. Agarwal had registered his company for three divisions of IR (North , North east, North Central).
- Contract – IR demanding onsite office , warehouse and workshop within BBC factory premises
- The document of advance acceptance clearly outlined proposed quarterly onsite inspection
- Inspection should make before any lot was dispatched to IR.



- Establishing onsite expenditure – Approx. Rs.200000 plus increase in admin cost.
- Company should put its stock in new warehouse (Building new warehouse cost Approx. Rs500000 and estimated expenditure for new workshop Approx. Rs.500000)
- BBC need to maintain adequate cash reserves to meet cash payment
- Total amount required for up gradation – Rs.1.2 million
- Cash credit Limit – Rs.2.5 Million already reached
- 2010-11 the co. had to pay more than RRs.640000 for financial charges and Interest

Questions for discussion:

1. Comment on working capital policy adopted by BBC Pvt Ltd.
2. Evaluate the company's cash position with focus on credit policy towards receivables and payables.
3. Is BBC a growing company? Which areas should be improved in the company for future growth?
4. Should Mr. Agarwal seek to improve BBC's working capital management or pursue complete financial policy restructuring?

Analysis:

1. A. Class discussion start with information given regarding working capital.

Working capital is the capital available for conducting the day to day operations of the business and consists of current assets and current liabilities.

BBC's current assets are mainly in the form of inventory, receivables, cash and bank balance and loans and advances. The company's levels of current assets are very high as compare to current liabilities. The current asset as a percentage of total asset is approximately 65% but average ratio in the manufacturing sector is 30%.

It indicates the excessive working capital which is not good for the company. Excessive working capital may prove disadvantageous to the company whereas shortage of working capital is also undesirable.

BBC has positive working capital but the company has high deferral periods and shorter collection period. BBC's current assets are mainly in the form of inventory, receivables which blocks the funds. Company should focus on quick sales and invest in short term deposits.



B. Discussion on types of working capital Approach and effect of each .Focus on approach adopted of BBC and its effect on liquidity position

Types of Working Capital Approach

- Conservative
- Aggressive

C. Component of working capital given in the case.

Current Assets Components

Current Liability Component

D. Discussion on Factors determining working capital requirement.

- Nature and size of the business
- Production policy
- Demand position
- Operating cycle
- Credit policy

E. Discuss the need of optimum working capital

F. Operating risk: High

2. Company's cash Position analyze based on current Assets.

Management should focus on optimum cash level to meet the short term requirement.

BBC's sales have been in the form of Credit. Company adopted liberal credit policy

.As a result of this large amount has been involved in debtors. There is slight fluctuation in the debtors which indicate the debtors are almost constant for last three years.(refer Exhibit 1)

Huge inventory also form a part of current assets i.e. raw material and finished goods .

BBC needs a sound collection policy to reduce the debtors and increase cash position.

BBC needs to focus on quick sales to convert inventory into the cash.

3. Discussion on various techniques of receivables management in detail and find out suitable policy for the organization.

4. BBC cannot be called the growing company. Because:

- a. Company is started shrinking
- b. Debtors collection policy shows casual approach



- c. Repayment of creditors before the credit period.
- d. Huge amount of inventory is block
- e. Blockage of working capital
- f. Blockage of funds
- g. Reduction in cash balance
- h. Reduction in gross block

4. Mr Agarwal needs to focus on working capital. Following are suggestion for improvement in working capital.

- a. Focus on account receivable. Offer some discount on quick payment
- b. Focus on increase in sales.
- c. Inventory should be managed by using JIT technique.
- d. The company should focus on realization of current inventory.



Unit -1 Business Finance

- Contents :-
 - Introduction to Business Finance,
 - Meaning and Definition of Financial Management,
 - Objectives of Financial Management- (Profit Maximization and Wealth Maximization),
 - Modern Approach to Financial Management- (Investment Decision, Financing Decision, Dividend Policy Decision),
 - Finance and its relation with other disciplines,
 - Functions of Finance Manager

Business Finance

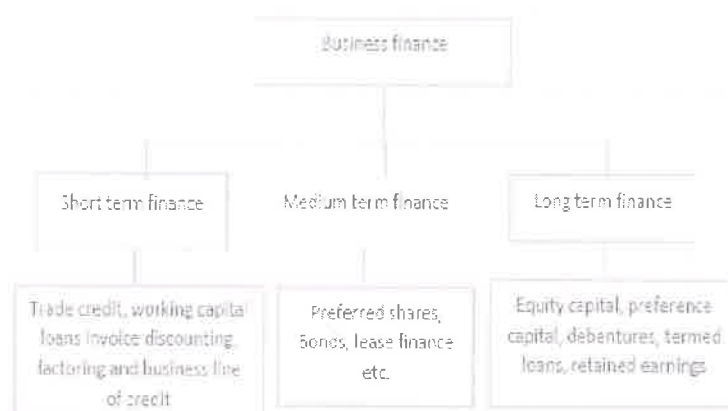
- Finance represents the money management and the process of acquiring the funds. Finance is a board term that describes the activities related to banking, leverage or debt, credit, capital markets, money and investments.
- Business finance tells about the funds and credit employed in the business. It also helps to manage the funds/money to make your business more profitable by considering financial statements (profit and loss accounts, balance sheets and cash flow statements).



Business Finance

- Business finance refers to funds availed by business owners to meet their needs that may include commencing a business, obtaining top-up funds to finance business operations, obtaining finance to purchase capital assets for the business, or to deal with a sudden cash crunch faced by the business.

Types of Business finances



Short term finance

- Financing the business for a short period of time (less than 1 year) is short term finance. It is also called working capital financing.
- Trade credit, working capital loans, invoice discounting, factoring, and business line of credit comes under short term finance.
- **Advantages** of short term finance are less interest, disbursed quickly and less documentation.
- Main **Disadvantages** of short term finance are the money which we get is smaller, it has fixed period of loan, interest rates keep on increasing, effects business and its liquidity.

Medium term finance

- This will be considered for two reasons, one when long term capital is not available and secondly, when deferred revenue expenditure write off period is three to five years.
- Financing for a period for medium term is between three to five years. Preferred shares, Bonds, lease finances, etc. comes under medium term finances.
- Medium term loans are more conservative than long term investments, but involves more risk than short term. It often looks for balance between risk and return.



Long term finance

- It is provided for a period of more than ten years. Long term finance is also called fixed capital finance. Equity capital, preference capital, Debentures, term loans, retained earnings comes under long term finance.
- The main purpose of getting these kinds of finances is to carry out the business on an expansionary scale from which, greater economic benefits are expected to arise in future.

Financial Management

- “Financial management is the activity concerned with planning, raising, controlling and administering of funds used in the business.” – **Guthman and Dougal**
- “Financial management is that area of business management devoted to a judicious use of capital and a careful selection of the source of capital in order to enable a spending unit to move in the direction of reaching the goals.” – **J.F. Brandley**
- “Financial management is the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operations.” – **Massie**



Traditional approach

- The traditional approach to the FM is restricted to raising to funds from various sources and completion of the legal formalities required to do the same. This suggest that a finance manager should know how to raise the funds and he is not supposed to do anything more than this
-

Modern Approach

- The modern approach to the FM says that there are three important functions which are expected to be performed by the Financial Management.
 - 1) How much amount of funds will be required by the firm?
 - 2) How to raise the amount required by the firm?
 - 3) How to invest the amount raised so that the objectives of financial management as well as the firm will be achieved?



Scope /Modern Approach of Financial Management

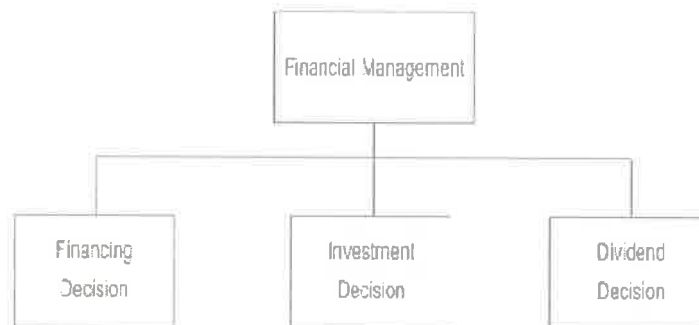
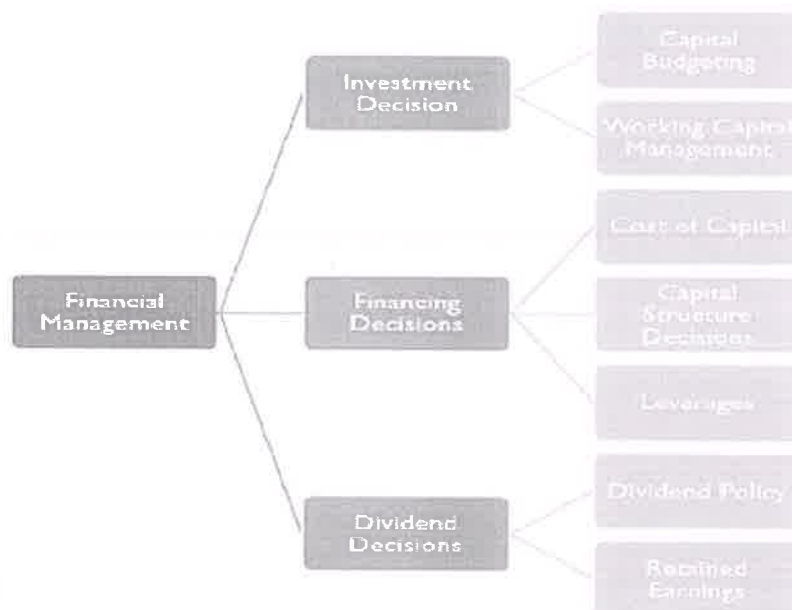


Fig. 1 - The scope of Financial Management



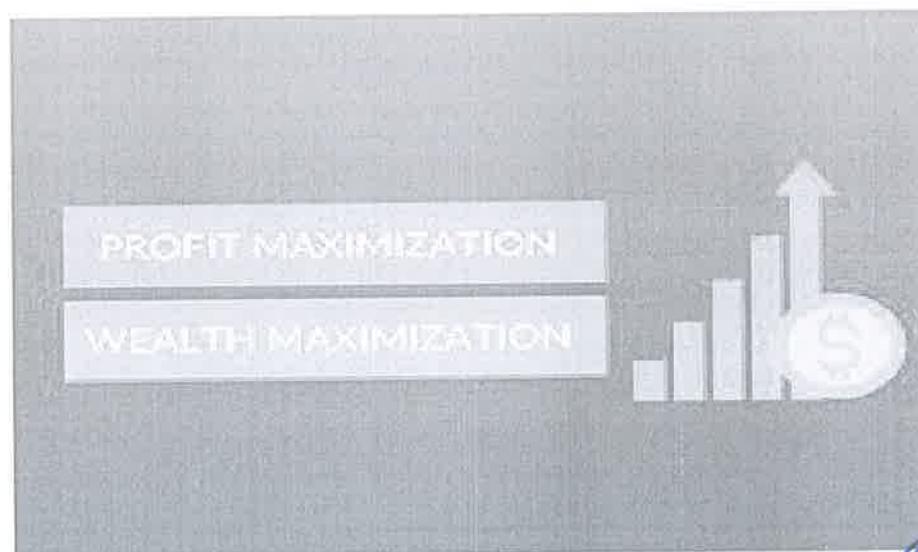
Role of the financial manager

The financial management department of any company is handled by a **financial manager**.

This department has numerous functions, such as:

- **Calculating the capital required**
- **Formation of capital structure**
- **Investing the capital**
- **Allocation of profits**
- **Effective management of money .**
- **Financial control**

Two major objectives



Profit Maximisation

- Profit maximisation is used as a standard of financing decisions. According to this approach, a firm should undertake all those activities which add to its profits and eliminate all others which reduce its profits. This objective highlights the fact that all the decisions—financing, dividend and investment, should result in profit maximisation.

Arguments in favour of profit maximisation approach

- Profit is a yardstick of efficiency on the basis of which economic efficiency of a business can be evaluated.
- It helps in efficient allocation and utilization of the scarce means because resources are applied to such uses only which maximize the profits.
- The rate of return on capital employed is considered the best measurement of the profits.
- Profit acts as a motivator which helps the business organisation in becoming more efficient through hard work.
- By maximizing profits, social and economic welfare is also maximized.
- Every business has limited capital, therefore, its efficient use is measured in terms of maximum profits.



Unfavourable Arguments for Profit Maximization

- It is vague
- It ignores the time value of money
- It ignores the society
- It is incomplete concept
- It is only for short term
- It emphasis on profit only
- It has a narrow scope
- It is a traditional approach
- It ignores the risk factor
- It is secondary objective

Wealth maximization

- Wealth maximization is one of the modern approaches which try to overcome the drawbacks of profit maximization.
- In modern times, profit maximization is not considered to be an ideal criterion for making investment and financing decisions. The prime objective of a business entity is to maximize value for its owners, equity shareholders.
- Wealth maximization is almost universally accepted and appropriate goal of a firm.
- According to wealth maximization, the managers should take decisions that maximize the net present value of the shareholders or shareholders wealth.
- It means to maximize the market value of shares



Arguments in favour of profit maximisation approach

- It is for long term
- ii. It emphasis on shareholders wealth
- iii. It considers society
- iv. It has a wider scope
- v. It is a modern approach
- vi. It considers the risk factor
- vii. It considers time value of money
- viii. It is primary objective
- It considers the effect of earnings per share, dividends paid or any other return to shareholders on the wealth of the shareholders.

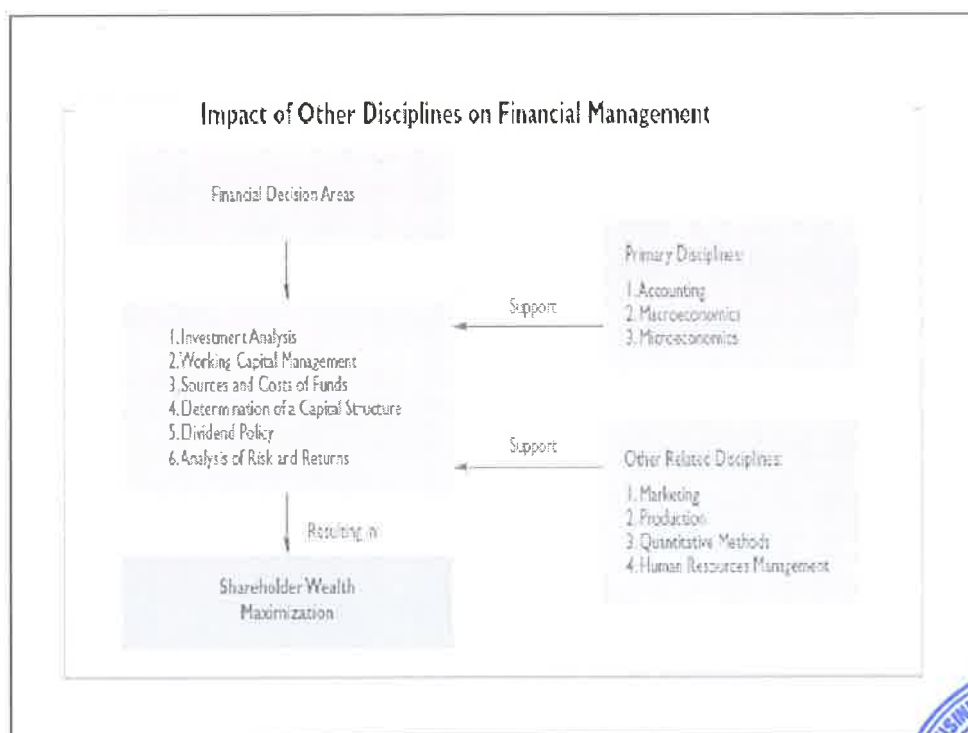
Unfavourable Arguments for Wealth Maximization

- (i) Wealth maximization assumes that the market price of shares of a company is directly influenced by the financial decision taken by it. But in the real world situation this assumption does not hold good because company-specific factors, there are several economy specific factors as well as industry-specific factors which influences the market value of shares
- (ii) Wealth maximization is nothing, it is also profit maximization, it is the indirect name of the profit maximization.
- (iii) Wealth maximization creates ownership-management controversy.
- (iv) Management alone enjoy certain benefits.
- (v) The ultimate aim of the wealth maximization objectives is to maximize the profit.
- (vi) Wealth maximization can be activated only with the help of the profitable position of the business concern



Financial Management & Economics

- Economic concepts like micro & macroeconomics are directly applied with the financial management approaches.
- Investment decisions, micro & macro environmental factors are closely associated with the functions of financial manager.
- Financial management also uses the economic equations like money value discount factor, economic order quantity etc.
- Financial economics is one of the emerging area, which provides immense opportunities to finance, and economical areas.



Financial Management & Production Management

- Production management is the operational part of the business concern, which helps to multiple the money into profit. Profit of the concern depends upon the production performance. Production performance needs finance, because production department requires raw material, machinery, wages, operating expenses etc. These expenditures are decided & estimated by the financial department & the finance manager allocates the appropriate finance to production department. The financial manager must be aware of the operational process and finance required for each process of production activities.

Financial Management & Mathematics

- Modern approaches of the financial management applied large number of mathematical & statistical tools & techniques.
- They are also called as econometrics.
- Economic order quantity, discount factor, time value of money, present value of money, cost of capital, capital structure theories, dividend theories, ratio analysis & working capital analysis are used as mathematical & statistical tools & techniques in the field of financial management



Financial Management & Marketing

- Produced goods are sold in the market with innovative & modern approaches. For this, the marketing department needs finance to meet their requirements.
- The financial manager or finance department is responsible to allocate the adequate finance to the marketing department.
- Hence, marketing & financial management are interrelated & depends on each other.

Financial Management & Human Resource

- Financial management is also related with human resource department, which provides manpower to all the functional areas of the management.
- Financial manager should carefully evaluate the requirement of manpower to each department and allocate the finance to the human resource department as wages, salary, remuneration, commission, bonus, pension & other monetary benefits to the human resource department. Hence, financial management is directly related with human resource management.



Financial Management & Accounting

- **Financial Accounting** It is concerned with the preparation of reports which provide information to users outside the firm. The most common reports are the financial statements included in the annual reports of stockholders and potential investors. The main objective of these reports is to inform stockholders, creditors and other investors how assets are controlled by a firm. In the light of the financial statements and certain other information, the accountant prepares funds firm statement, cash flow statement and budgets.
- **Cost Accounting:** It deals primarily with cost data. It is the process of classifying, recording, allocating and reporting the various costs incurred in the operation of an enterprise. It includes a detailed system of control for material, labour and overheads. Budgetary control and standard casting are integral part of cost accounting.
- **Management Accounting:** Functions of management accounting include all activities connected with collecting, processing, interpreting and presenting information to the management.



Format of Vertical Balance Sheet

Particulars	Amount	Amount
1) Equity and Liabilities		
i) Shareholder's Funds		
a) Share Capital		
Equity Share capital	xxx	
Preference Share Capital	xxx	xxx
b) Reserves and Surplus		
General Reserves	xxx	
Capital reserves	xxx	
Profit and Loss A/c	xxx	
Securities Premium	xxx	xxx
Total Shareholder's Fund (i)		xxx
ii) Non- Current Liabilities		
a) Long-Term Borrowings (Secured and Unsecured)		
Bank (Term) Loan	xxx	
Debentures	xxx	xxx
b) Long-Term Provisions		xxx
Total Non- Current Liabilities (ii)		xxx
iii) Current Liabilities		
Short Term Borrowing	xxx	
Creditors	xxx	
Trade Payables	xxx	
Bills Payables	xxx	
Outstanding Expenses	xxx	
Prepaid Incomes		
Proposed Dividend	xxx	
Provision for Tax	xxx	
Bank Overdraft	xxx	xxx
Total Current Liabilities(iii)		xxx
Total Equities and Liabilities (i+ii+iii)		xxxx
2) Assets		
i) Non- Current Assets		
a) Fixed Assets		
Tangible Assets		
Plant and Machinnery	xxx	
Furniture	xxx	
Land and Building	xxx	
Intangible Assets		
Goodwill	xxx	
Copyright	xxx	
Patents	xxx	
Tade Marks	xxx	xxx



b) Non- Current Investments		xxx
c) Long-Term Loans and Advances		xxx
Total Non- Current Assets(i)		xxx
ii) Current Assets		
short term Investments	xxx	
Stock/Inventories	xxx	
Trade Receivables	xxx	
Cash and Cash Equivalents	xxx	
Bank	xxx	
Short term loans and advances	xxx	
Debtors	xxx	
Bills Receivables	xxx	
Prepaid Expenses	xxx	
Outstanding incomes	xxx	
Total Current Assets (ii)		xxx
Total Assets (i+ii)		xxx

Format of Vertical Income Statement

Partiulars	Amount	Amount
1) Revenue From Operations		xxxx
2) Add:- Other Income		xxxx
3) Total Revenue (1+2)		xxxx
4) Less :- Expenses		
Cost of Material consumed	xxx	
Purchase of Inventories of Finished Goods	xxx	
Work in Progress and Stock in Trade	xxx	
Employees Benefits Expenses	xxx	
Finance Costs	xxx	
Depreciation and Amortisation Expenses	xxx	
Other Expenses	xxx	
Total Expenses		xxxx
5) Profit Before Tax (3-4)		xxxx
6) Less :- Tax		xxxx
7) Profit After Tax (5-6)		xxxx



Analysis of Financial Statements

1. The balance sheet

needs to be arranged in a vertical format which is suitable for further analysis.

..... Company Ltd.

Balance Sheet as on

Particulars	Amount ₹	Amount ₹
I) Sources of Funds		
A) <u>Owners Fund/Shareholders Fund.</u>		
a) Share Capital		
Equity share capital	xxx	
Preference share capital.	xxx	
b) Add : Reserves and surplus		
Profit & Loss A/c	xxx	
General reserve	xxx	
Securities Premium.	xxx	
c) Less : Fictitious Assets	xxx	
Net Worth/Owners Fund.	(xxx)	xxx
B) Borrowed Funds		
Bank Loan	xxx	
Debentures	(xxx)	
Total Fund Available		xxx
II) Application of Funds		
1) Fixed Assets	xxx	
Land and Building	xxx	
Plant and Machinery	xxx	
Furniture	xxx	
Vehicle:	xxx	
2) Investment		xxx
3) Working Capital		xxx
Current Assets		
Quick Assets		
Cash	xxx	
Bank	xxx	



Debtors	XXX	
Bill Receivable	XXX	
Total Quick Assets		XXX
<u>Non-Quick Assets</u>		
Stock	XXX	
Prepaid expenses	XXX	
Advances	XXX	XXX
Total Non-quick Assets		
Total Current Assets (Quick + Non Quick Asset)		XXX
Less Current Liabilities		
<u>Quick Liabilities</u>		
Creditors	XXX	
Outside Expenses	XXX	
Bill Payable	XXX	XXX
Total Current Liability		
<u>Non-Quick Liability</u>		
Bank overdraft	XXX	XXX
Total Current Liabilities		
Working Capital (Current Assets Less Current Liabilities)		XXX
Total Funds Employed /Applied		XXX

Income Statement:

The Profit & Loss account needs to be arranged in a vertical format which is suitable for further analysis. It is also called a vertical Income Statement. Its format is given below.



Company Ltd.

Vertical Income Statement for the year ended

Particulars	Amount (₹)	Amount (₹)
Income		
Sales	xxx	
(-) Sales Return	xxx	
Net Sales		xxx
Less Cost of Goods Sold		
Opening Stock	xxx	
Add : Purchases	xxx	
Add : Wages	xxx	
Add : Carriage Inward	xxx	
Add : Direct Exp.	xxx	xxx
Less Closing Stock	xxx	
Net Cost of Goods Sold		xxx
Gross Profit Net Sales - Net Cost of Goods Sold)	xxx	
Less : Operating Exp.		
a. Administrative Exp.	xxx	
b. Finance Exp.	xxx	
c. Selling Exp.	xxx	
Total Operating Expenses		xxxx
Operating Profit (Gross Profit - Operating Expenses)		xxxx
Add : Non-operating Income		xxx
Less : Non-operating Exp.		(xxxx)
Net Profit Before Tax		xxx
Less : Tax (Charged on Net profit Before Tax)		xxx
Net Profit After Tax		xxx



M/S		co	
Income statement			
For Year ended			
Particulars	Rs	Rs	Rs
Sales			
Gross Sales		XX	
Less : Returns (Inwards/Sales)		(XX)	
NetSales			XX
Less : Cost Of Goods Sold			
a) Opening Stock			
Raw Material	XX		
W I P	XX		
Finished Good	XX	XX	
b) Purchase	XX		
Less : Return	(XX)	XX	
c) Direct Expenses and Fatory expenses			
Carriage Inward (Freight)	XX		
Import Duty	XX		
Handling Charges	XX		
Wages and Salaries	XX		
Power and fuel	Xx		
FactoryExpenses	XX		
Depreciation on Machinery	XX		
Depreciation on Factory Building	XX	XX	
d) Less : Closing Stock			
Raw Material	XX		
WIP	XX		
Finished Goods	XX	(XX)	
e) Less : Sale of Scrap		(XX)	
. ' . COGS (a+b+c-d-e)			(XX)
Gross Profit			XX
Less : Operating Expenses			
a) Office and Administration Expenses :			
Staff Salaries	XX		
Rent, Rates and Taxes	XX		
Unproductive Wages	XX		
Repairs to premises	XX		
Insurance	XX		
Printing and Stationary	XX		
Office Cleaning	XX		
Postage and Telephones	XX		
Staff Welfare Expenses	XX		
Conveyance Charges	XX		
Misc. Expenses	XX		
Depreciation on Office Bldg. & Furniture	XX	XX	



b) Selling Expenses :			
Carriage Outwards	XX		
Commission Allowed	XX		
Salesman commission/ Salary	XX		
Travelling Expenses	XX		
Entertainment Expenses	XX		
Sales Promotion Expenses	XX		
Advertising	XX		
Bad Debts (Normal)	XX		
Warehouse Expenses	XX	XX	
c) Finance Expenses :			
Cash Discount	XX		
Bank Charges	XX		
Bank Commission	XX		
Bad Debts (Abnormal)	XX		
Foreign Exchange Loss	XX	XX	
∴ Operating Expenses (a+b+c)			(XX)
Net Operating profit before interest			XX
Less : Interest			(XX)
Operating Profit After Interest			XX
Add : Non Operating Income			
Interest Earned / received		XX	
Misc. Incomes		XX	
Profit on sale of Fixed Asset		XX	
Profit on sale of Investment		XX	
Interest on Loan given to Outsiders		XX	
Dividend on Investments (Dividend Received)		XX	
Compensation received as per Court Order		XX	XX
Less : Non Operating Expenses & Losses			
Loss on sale of Fixed Asset		XX	
Loss by Fire		XX	
Loss on sale of Investment		XX	
Penalty		XX	(XX)
Net Profit before Tax			XX
Less : Income Tax			(XX)
Net Profit after Tax			XX
Add: Last Year Balance b/f (cr)			XX
Less: Transfer to Reserves			
Transfer to General Reserve/ CRR/ Capital Reserve			(XX)
Less: Preference Dividend			(XX)
Less: Proposed dividend			(XX)
Less: Interim Dividend			(XX)
∴ Retained Earnings			XX



M/S
Vertical Balance Sheet

Particulars	Rs	Rs	Rs	Rs
I. Sources of Funds :				
1. Owners' Funds : (Shareholder Fund / Net Worth)				
A). Equity Shareholder Fund :				
i). Equity Shares Capital			XX	
Add : B). Reserves and Surplus :				
i). Capital Reserve		XX		
ii). Capital Redemption Reserve		XX		
iii). Share Premium		XX		
iv). General Reserve		XX		
v). Profit & Loss A/C Cr. Balance		XX		
vi). Sinking Fund / Other Funds		XX		
Total Reserves and Surplus			XX	
Less :C). Losses & Fictitious Assets :				
i). Profit & Loss A/C Dr. Balance		(XX)		
ii). <u>Misc. Expenditure not written off</u>				
Preliminary Expenses	XX			
Less: Written Off	(XX)	XX		
Share issue Expenses		XX		
Discount on issue of Shares & Debentures		XX		
Deferred Revenue Expenditure		XX		
Total Losses & Fictitious Assets			XX	
Total Owners' Funds				XX
2. Borrowed Funds :				
A). Secured Loans :				
i). Debentures or Bonds		XX		
ii). Loans from Banks		XX		
iii). Loans from other Financial Institutions		XX		
Total Secured Loans			XX	
B). Unsecured Loans :				
i). Public Deposits (Fixed Deposits from Public)		XX		
ii). Other Loans		XX		
Total Unsecured Loans			XX	
Total Borrowed Funds				XX
Total Funds Available / Capital Employed				XX
II. Application of Funds :				
1. Net Fixed Assets :				
A). Tangible :				
i). Land and Building (Cost)	XX			
Less : Depreciation	(XX)	XX		
ii). Leaseholds (Cost)	XX			
Less : Depreciation	(XX)	XX		
iii). Plant & Machinery (Cost)	XX			
Less : Depreciation	(XX)	XX		
iv). Furniture & Fittings (Cost)	XX			
Less : Depreciation	(XX)	XX		
v). Vehicles (Cost)	XX			
Less : Depreciation	(XX)	XX		
Net Tangible Assets			XX	
B). Intangible :				
i). Goodwill	XX			
Less: written Off	(XX)	XX		
ii). Patents, Trademarks & Designs		XX		
Net Intangible Assets			XX	
C). Capital Work-in-Progress :			XX	
Total Net Fixed Assets				



Particulars	Rs	Rs	Rs	Rs
2. Long Term Investments :				
i). Trade Investments			XX	
ii). Investments in Immoveable Properties			XX	
iii). Investments in Capital of Partnership Firms			XX	XX
3. Working Capital :				
A) Current Assets				
Quick Assets :				
a). Cash & Bank	XX			
b). Debtors (Net)	XX			
c). Bills Receivable	XX			
d). Accrued Income	XX			
e). Short Term / Marketable Investments	XX			
Total Quick or Liquid Assets		XX		
Add : Non Quick Assets				
i). Inventory	XX			
ii). Pre-Payments (Prepaid Expenses, Advance Tax etc)	XX			
Total Non Quick Assets		XX		
Total Current Assets			XX	
B) Less: Current Liabilities				
a) Quick Liabilities				
a). Creditors	XX			
b). Bills Payable	XX			
c). Advances Received	XX			
d). Outstanding Expenses	XX			
e). Accrued Interest	XX			
f). Provision for Taxation	XX			
g). Unclaimed Dividend	XX			
h). Proposed Dividend	XX			
Total Quick Liabilities		XX		
b) Non Quick Liabilities				
Add : Bank Overdraft		XX		
Total Current Liabilities			(XX)	
Net Current Assets or Working Capital				XX
Total Assets or Total Funds Employed				





**SINHGAD TECHNICAL EDUCATION SOCIETY'S
SINHGAD INSTITUTE OF BUSINESS ADMINISTRATION
& COMPUTER APPLICATION**

(Affiliated to University of Pune & Approved by AICTE)

Gat No. 309/310, Kusgaon(Bk.), Off Mumbai - Pune Expressway, Lonavala, Pune - 410 401.

Student's Name : _____

Roll No. : _____ Class & Division : _____

Semester : _____ Paper Code : _____

Subject : _____

Date : _____ Section (If any) : _____

Main Answer Book : _____ + No. of Supplements : _____ = Total : _____

Jr. Supervisor's Name, Signature & Date

Question No.	1	2	3	4	5	6	7	8	9	10	Total / Out of	Signature of Examiner
Marks												

Start writing from here:

Ratio Analysis

- A) Liquidity Ratios
- B) Profitability Ratios
- C) Leverage Ratios
- D) Activity Ratios

Liquidity Ratio

Liquidity ratio formulae are used to ascertain the company's liquidity position. It is used to determine the company's capacity towards its short term liabilities.

A high liquidity ratio indicates that the company's cash position is good.

- 1) Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

The standard Current Ratio is 2:1

It indicates that for every rupee of current liability the company has Rs 2 in the form of current assets.



2) Quick Ratio / Acid Test Ratio

$$= \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$= \frac{\text{Current Assets} - \text{Stock} - \text{PIR exp}}{\text{Current Liabilities}}$$

Standard Ratio = 1:1

It indicates the immediate solvency of a company and a very short term financial strength or soundness or solvency of a concern.

3) Cash Ratio

$$= \frac{\text{Cash} + \text{Marketable Securities}}{\text{Current Liabilities}}$$

It indicates immediate availability of cash for liquidity.

Profitability Ratios

$$1) \text{ Gross Profit Ratio } = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

It indicates the margin earned by the business before its operational expenses. Every company should try to maximize the ratio. Higher Ratio is always better for the company, but it should not come at the cost of quality or customer satisfaction.

$$\text{Gross Profit} = \text{Net Sales} - \text{COGS}$$

$$\text{COGS} = \text{RM} + \text{labour Cost} + \text{other Direct expenses}$$



$$2) \text{ Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

Net Profit = Net Profit After Tax.

This ratio shows the overall profitability available for the owners at it considers both the operating and non operating incomes & expenses.

Higher the ratio, the more return for the owners. It is an important ratio for investors & financiers.

$$3) \text{ Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Net Sales}} \times 100$$

operating profit = Net Sales - (Costs + Administrative & office exp + Selling & Dis exp + finance. exp)

or

operating profit = Net Profit + ~~Net~~ operating expenses - Non operating incomes.

$$4) \text{ Operating Ratio} = \frac{\text{Costs + Operating Expenses}}{\text{Net Sales}} \times 100$$

This ratio expresses the relationship between operating costs & net sales. It is used to check the efficiency of the business & its profitability.



5) Return on Capital Employed /
Return on Investment (ROI)

$$= \frac{\text{Earning Before Interest \& Tax (EBIT)}}{\text{Capital Employed}} \times 100$$

Capital Employed = Total Assets - Liabilities
(Total fund employed)

It measures how well a company is able to generate profits from its Capital.

6) Return on Net worth / Return on Shareholders fund / Return on owners fund. / Return on Proprietor's fund.

$$= \frac{\text{NPAT}}{\text{owners fund}} \times 100$$

It indicates whether the investment done by the shareholders are able to generate profitable returns or not.

It should always be higher than the return on investment which otherwise would indicate that the company funds are not utilized properly.

7) Return on Equity Share Capital.

$$= \frac{\text{NPAT} - \text{Preference Dividend}}{\text{Paid up Equity Share Capital}}$$

This ratio indicates whether the returns for the equity shareholders of the company are satisfactory or not.



8) Earning Per share =

$$= \frac{\text{NPAT} - \text{Pref. Dividend}}{\text{No. of Equity Shares}}$$

It shows the company's revenue concerning one share. It is helpful to investors for decision making about the purchasing / sale of shares. If EPS is high, the company's stock price will be increased.

9) Dividend Payout Ratio.

$$= \frac{\text{Dividend Per share}}{\text{Earning Per share}}$$

10) Price Earning Ratio

$$= \frac{\text{Market Price Per share}}{\text{Earning per price per share}}$$

Leverage Ratio / Solvency Ratio

1) Debt Equity Ratio = $\frac{\text{Long Term Debt}}{\text{Shareholder's fund}}$

1) Standard = 2:1

2) It shows the proportion of equity & debt a company is using to finance its assets

3) If ratio is less than 2:1 will indicate that the firm is not taking any risk & mainly using shareholder's fund for financing its requirements

4) If it's greater than 2:1, it may prove to be more risky in the future & hence a firm should keep a constant watch on this ratio



2) Interest Coverage Ratio

$$= \frac{\text{EBIT (EBDIT)}}{\text{Interest Expenses}}$$

⇒ Higher interest coverage Ratio imply the greater ability of the firm to pay off its interest.

⇒ If interest coverage is less than 1, then EBDIT is insufficient to pay off interest, implying finding other ways to arrange funds.

3) Debt Service Coverage Ratio (DSCR)

$$= \frac{\text{EBIT (Operating Income) (EBDIT)}}{\text{Interest + principle payment}}$$

It signifies the ability of the firm to pay interest & principle amt (EMI) or all obligations related to debt in a year.

⇒ If less than 1 implies that the operating cash flows are insufficient for debt servicing, indicating negative cash flows.

4) Capital Gearing Ratios.

Funds bearing fixed interest / fixed Dividend
Equity ~~owner~~ Shareholders fund

Pre share Capital + Debenture + Loans + Bonds

ESC + R&S

25 : 1 : 50 : 1 : Ideal



~~inverse of~~

$$\begin{aligned} 5) \text{ Proprietary Ratio} &= \frac{\text{Total Assets}}{\text{Proprietors fund}} \\ &= \frac{\text{CA} + \text{FA} - \text{Liabilities}}{\text{Assets}} \end{aligned}$$

It shows the proportion of total assets of a company which are financed by proprietors fund.

60 - 75%

If it is more than 75% means sufficient comfort for creditors since it points towards lesser dependence on external sources.

Activity Ratio / Turnover Ratios

1) Stock / Inventory Turnover Ratio.

$$= \frac{\text{COGS}}{\text{Average Stock}}$$

$$\text{Average Stock} = \frac{\text{OIP Stock} + \text{clo Stock}}{2}$$

→ This ratio indicates the number of times the finished stock is turned into cash during a given accounting period.

- Higher Ratio shows rapid turnover of stock & consequently shorter holding period.

→ Lower ratio indicates stock is slow moving & there is a longer holding period.

2) Debtors Turnover Ratio.

Credit Sales

Average Debtors / Accounts Receivable.

$$\text{Average Debtors} = \frac{\text{OIP Debtors} + \text{clo Debtors}}{2}$$



Debtal Collection Period : 12

h)

Debtal Turnover
Ratio

⇒ It shows how quickly credit sales are converted into cash. It measures the efficiency of the firm in managing & collecting the credit issued to the customers.

⇒ Higher the Debtors Turnover Ratio, better is the credit management of the firm. lower is the collection period lower Ratio, higher collection period.

3) Creditors Turnover Ratio

$$\frac{\text{Credit Purchase}}{\text{Average Accounts Payable}} \times \text{time}$$

Credit Payment Period : 12

months

Credit Turnover
Ratio

Payment period should be more, i.e. Ratio should be Higher

⇒ If Credit payment period is

⇒ If Credit Turnover Ratio is high. it indicates that there is not much promptness in the payment made to creditors & need to be improved

⇒ If Credit Turnover Ratio is low that means payment to creditors is quite prompt but the firm is not taking full advantage of the credit allowed by the creditors



er

$$4) \text{ Total Assets Turnover Ratio} \\ = \frac{\text{Net Sales}}{\text{Average total assets}}$$

ing

$$5) \text{ Working Capital Turnover Ratio} \\ = \frac{\text{Net Sales}}{\text{Net working Capital}}$$

er

l

er

h. e



Q.1

Ans:->

Statement of Working Capital Requirement

Q.2

Ans:->

A) Current Assets

A) (

1) Stock

1) US

2) RT

3) WT

R.

D.

D.

c) f

2) De

3)

$$a) \text{ RM } (104000 \times 100 \times \frac{4}{52}) \quad 800,000$$

b) W.T.P

$$\text{RM } (104000 \times 100 \times \frac{2}{52} \times 100\%) \quad 400,000$$

$$\text{D.L } (104000 \times 40 \times \frac{2}{52} \times 50\%) \quad 80,000$$

$$\text{D.OH } (104000 \times 80 \times \frac{2}{52} \times 50\%) \quad 160,000 \quad 6,40,000$$

$$c) \text{ finished Stock } (104000 \times 220 \times \frac{4}{52}) \quad 17,60,000$$

less

$$2) \text{ Debtors } (104000 \times 240 \times \frac{8}{52}) \quad 38,40,000$$

1)

$$3) \text{ Cash} \quad 25,000$$

2)

3)

$$\text{Total Current Assets} \quad 70,65,000$$

less B) Current Liabilities

$$1) \text{ Creditors } (104000 \times 100 \times \frac{4}{52}) \quad 800,000$$

$$2) \text{ o/s wages } (104000 \times 40 \times \frac{1.5}{52}) \quad 1,20,000$$

$$\text{Total Current Liabilities} \quad 9,20,000$$

A

$$\text{Net working Capital} \quad 61,45,000$$

A



Q.2
Ans: Statement of Working Capital.

A) Current Assets

1) Stock			
a) RM	$54000 \times 50 \times \frac{1}{12}$		225000
b) WIP			
RM	$54000 \times 50 \times \frac{0.5}{12} \times 100\%$	113500	
D.L	$54000 \times 20 \times \frac{0.5}{12} \times 50\%$	22500	
D.OH	$54000 \times 30 \times \frac{0.5}{12} \times 50\%$	33750	168750
c) FM	$54000 \times 100 \times \frac{1}{12}$		4,50,000
2) Debtors	$54000 \times 130 \times \frac{1}{12} \times 75\%$		4,38,750
3) Cash			1,00,000
	<u>Total Current Assets</u>		<u>13,82,500</u>

less B) Current liabilities

1) Creditors	$= 54000 \times 50 \times \frac{1}{12}$	225000
2) O/S wages	$= 54000 \times 20 \times \frac{10}{360}$	30000
3) O/S OHS	$= 54000 \times 30 \times \frac{1}{12}$	1,35,000
	<u>Total Current liabilities</u>	<u>3,90,000</u>
	<u>Net Working Capital</u>	<u>9,92,500</u>

* Debtal can also be calculated at cost basis instead of selling price basis.

* If in the exam, they specially mention that calculate Debtal on sales basis then calculate it on sales basis otherwise, calculate the same on at cost basis.



Ratio Analysis

From the following information, prepare a summarized balance sheet as at 31st March 2021

Working Capital Rs 120000

R & S Rs 80000

Bank overdraft Rs 20000

L.A / Proprietary fund Ratio = 0.75

Current Ratio 2.5 & Liquid Ratio = 1.5

Ans

Balance Sheet

Liabilities	Amt	Assets	Amt.
Paid-up Capital	400000	Fixed Assets	360000
R & S	80000	Current Assets	200000
Bank overdraft	20000	Stock	80000
Other Current Liabilities	60000	Other CA	120000
	<u>560000</u>		<u>560000</u>

$$\text{Current Ratio} = \frac{CA}{CL} = \frac{2.5}{1}$$

$$CA = 2.5 CL$$

$$\text{Working Capital} = CA - CL = 120000$$

$$2.5 CL - CL = 120000$$

$$1.5 CL = 120000$$

$$CL = \frac{120000}{1.5} = 80000$$

$$CA - CL = W.C.$$

$$CA - 80000 = 120000$$

$$CA = 120000 + 80000 = 200000$$

Liquid Ratio = Quick Assets

CL

$$1.5 = \frac{CA - \text{Stock}}{CL}$$

$$1.5 = \frac{200000 - \text{Stock}}{80000}$$

$$120000 = 200000 - \text{Stock}$$

$$\text{Stock} = 200000 - 120000 = 80000$$



$$\text{Proprietary Ratio} = \frac{F.A + W.C}{P. fund.}$$

$$\frac{F.A}{P. fund.} = \frac{0.75}{1}$$

ie. working Capital is 0.25

$$W.C = 120000 = 0.25$$

$$P.C = \text{ie. } 0.75$$

(360000)

$$P. fund. = P. Ratio \times \frac{F.A}{P. fund.}$$

$$0.75 = \frac{360000}{P. fund.}$$

$$P. fund. = \frac{0.75 \times 360000}{0.75} = \underline{\underline{480000}}$$

Q.2) Calculate the balance sheet given in the under mentioned proforma with the help of following ratios

Total Assets / Net worth	3.5
Sales / Fixed Assets	6
Sales / Current Assets	8
Annual Sales	Rs 25 lacs
Sales / Inventory	15
Sales / Debtors	18
Current Ratio	2.5



Balance Sheet.

Liabilities	Rs	Assets	Rs
Net worth	208333	Fixed Assets	416667
Long Term Debt	325834	Inventory	166667
Current liabilities	125000	Debtors	138889
Total Liabilities	729167	Liquid Assets	(6944)
	=	Total CA	(312500)
		Total Assets	729167
			=

$$\text{Ans } \frac{\text{Sales}}{\text{CA}} = \frac{8}{1}$$

$$\frac{2500000}{\text{CA}} = \frac{8}{1}$$

$$\text{CA} \times 8 = 2500000$$

$$\text{CA} = 312500$$

$$\frac{\text{Sales}}{\text{FA}} = \frac{6}{1}$$

$$\frac{2500000}{\text{FA}} = \frac{6}{1}$$

$$\text{FA} \times 6 = 2500000$$

$$\text{FA} = 416667$$

$$\frac{\text{Sales}}{\text{Inventory}} = \frac{15}{1}$$

$$\frac{2500000}{\text{Inventory}} = \frac{15}{1}$$

$$\text{Inventory} = 166667$$

$$\frac{\text{Sales}}{\text{Debtors}} = \frac{18}{1}$$

$$\frac{2500000}{\text{Debtors}} = \frac{18}{1}$$

$$\text{Debtors} = 138889$$

$$\begin{aligned} \text{Liquid Assets} &= \text{CA} - \text{Stock} - \text{Debtors} \\ &= 312500 - 166667 - 138889 \\ &= 6944 \end{aligned}$$

$$\frac{\text{CA}}{\text{CL}} = \frac{2.5}{1}, \quad \frac{312500}{\text{CL}} = \frac{2.5}{1}, \quad \text{CL} = \underline{125000}$$

$$\frac{\text{TA}}{\text{N.W.}} = \frac{3.5}{1}, \quad \frac{729167}{\text{N.W.}} = \frac{3.5}{1}, \quad \text{N.W.} = \underline{208333}$$



RATIO ANALYSIS**Problem 1**

From the following Balance Sheet of XYZ Ltd. Calculate the following ratios.

1. Current ratio
2. Liquid ratio
3. Absolute Liquidity ratio
4. Current assets to Fixed assets ratio
5. Debt to equity ratio
6. Proprietary ratio
7. Capital gearing ratio
8. Fixed assets ratio

Balance Sheet as on 31st March 2019

Liabilities	Rs.	Assets	Rs.
Equity Capital	10,00,000	Goodwill (At Cost)	5,00,000
6% Pref. Capital	5,00,000	Plant & Machinery	6,00,000
General Reserve	1,00,000	Land & Building	7,00,000
Profit & Loss A/c	4,00,000	Furniture	1,00,000
Prov. For taxation	1,76,000	Inventories	6,00,000
Bills Payable	1,24,000	Bills Receivable	30,000
Bank Overdraft	20,000	Debtors	1,50,000
Creditors	80,000	Bank	2,00,000
12% Debentures	5,00,000	Investment (short-term)	20,000
	29,00,000		29,00,000

Problem 2

Betal Manufacturing Company submits the following Profit and Loss Account for the year ended 31st March 2019

Dr. Profit & Loss A/c Cr			
Particulars	Rs.	Particulars	Rs.
To Opening stock	52,000	By Sales	3,20,000
To Purchases	1,60,000	By Closing Stock	76,000
To wages	48,000		
To Manufacturing exp	32,000		
To Gross profit c/d	1,04,000		
To Selling & Dist. exp	<u>3,96,000</u>		<u>3,96,000</u>
To Admin. Exp	8,000	By Gross profit b/d	1,04,000
To loss by fire	45,600	By profit on sale of shares	9,600
To loss on sale of furniture	2,400		
To Net Profit	1,600		
	56,000		
	1,13,600		1,13,600

Calculate:

1. Gross profit ratio
2. Net profit ratio
3. Operating profit ratio
4. Operating net profit ratio



The summarised final accounts of J Ltd. & K Ltd are as follows

Balance Sheet

Liabilities	K Ltd ₹	K Ltd ₹	Assets	K Ltd ₹	K Ltd ₹
Share Capital	88,000	88,000	Fixed Assets	1,21,000	97,000
Reserves	42,000	35,000	Current Assets	1,25,000	1,03,000
8% Debentures	22,000	22,000			
Current liability	94,000	55,000			
	2,46,000	2,00,000		2,46,000	2,00,000

Revenue Statement for the year

Particulars	J Ltd ₹	K Ltd ₹
Sales	3,40,000	2,64,000
Less: Cost of Sales	2,97,000	1,98,000
Gross Profit	43,000	66,000
Less: Operating Expenses	23,000	44,000
Net Profit Before Tax	20,000	22,000
Less: Tax	12,000	9,000
Profit After Tax	8,000	13,000
Less: Dividend	1,000	7,000
Retained Earning	7,000	6,000

You are required to calculate the following ratios and comment.

1. Proprietary ratio
2. Capital gearing ratio
3. Gross profit ratio
4. Operating ratio
5. Return on capital employed ratio
6. Return on proprietors equity ratio
7. Expenses ratio
8. Net profit ratio



Following are the Trading and Profit and Loss Account for the year ending 31st March 2011 and Balance Sheet of Jaipan Ltd as on 31st March 2011

Profit & Loss A/c

Particulars	₹	Particulars	₹
To Opening Stock	1,25,000	By Sales	5,00,000
To Purchases	6,10,000	By Closing Stock	3,55,000
To Gross Profit c/d	1,20,000		
	8,55,000		8,55,000
To Sundry Expenses	80,000	By Gross Profit b/d	1,20,000
To Net Profit	40,000		
	1,20,000		1,20,000

Balance Sheet

Particulars	₹	Particulars	₹
Share Capital	7,00,000	Net Block	5,50,000
Reserves & Surplus 50,000		Stock	1,55,000
Add: Profit for the year 40,000	90,000	Debtors	1,80,000
Bank Overdraft	35,000	Cash	90,000
Creditors	1,50,000		
	9,75,000		
	9,75,000		9,75,000

You are required to calculate the following ratios and give your comments. Current Ratio, Quick Ratio, Gross Profit to Sales, Stock Turnover, Debtors Turnover Ratio, net profit to paid up Capital.

Stock Turnover Ratio = $\frac{\text{COGS}}{\text{AV. Stock}} = \frac{380000}{240000} = 1.58 \text{ times}$

Debtors Turnover Ratio = $\frac{\text{Cr. Sales}}{\text{AV. Dr. + AV. B/p.}}$





SINHGAD TECHNICAL EDUCATION SOCIETY'S
**SINHGAD INSTITUTE OF BUSINESS ADMINISTRATION
& COMPUTER APPLICATION**

(Affiliated to University of Pune & Approved by AICTE)

Gat No. 309/310, Kusgaon(Bk.), Off Mumbai.- Pune Expressway, Lonavala, Pune - 410 401.

Student's Name : _____

Roll No. : _____ Class & Division : _____

Semester : _____ Paper Code : _____

Subject : _____

Date : _____ Section (If any) : _____

Main Answer Book : _____ + No. of Supplements : _____ = Total : _____

Jr. Supervisor's Name, Signature & Date

Question No.	1	2	3	4	5	6	7	8	9	10	Total / Out of	Signature of Examiner
Marks												

Start writing from here:

Ratio Analysis

- A) Liquidity Ratios
- B) Profitability Ratios
- C) Leverage Ratios
- D) Activity Ratios

Liquidity Ratio

Liquidity ratio formulas are used to ascertain the company's liquidity position. It is used to determine the company's capacity towards its short term liabilities.

A high liquidity ratio indicates that the company's cash position is good.

- 1) Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

The standard Current Ratio is 2:1

It indicates that for every rupee of current liability the company has Rs 2 in the form of current assets.



2) Quick Ratio / Acid Test Ratio

$$= \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

$$= \frac{\text{Current Assets} - \text{Stock} - \text{PIR exp}}{\text{Current Liabilities}}$$

Standard Ratio = 1:1

It indicates the immediate solvency of a company and a very short term financial strength or soundness or solvency of a concern.

3) Cash Ratio

$$= \frac{\text{Cash} + \text{Marketable Securities}}{\text{Current Liabilities}}$$

It indicates immediate availability of cash for liquidity.

Profitability Ratios

1) Gross Profit Ratio = $\frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$

It indicates the margin earned by the business before its operational expenses. Every company should try to maximize the ratio. Higher Ratio is always better for the company, but it should not come at the cost of quality or customer satisfaction.

$$\text{Gross Profit} = \text{Net Sales} - \text{COGS}$$

$$= \text{RM} + \text{labour Cost} + \text{other Direct expenses}$$



$$2) \text{ Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

Net Profit = Net Profit After Tax.

This ratio shows the overall profitability available for the owners as it considers both the operating and non operating incomes & expenses.

Higher the ratio, the more returns for the owners. It is an important ratio for investors & financiers.

$$3) \text{ Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Net Sales}} \times 100$$

Operating Profit = Net Sales - (Costs + Administrative & office exp + Selling & Dis exp + finance exp)

or

Operating Profit = Net Profit + ~~Net~~ Non-operating expenses - Non operating incomes.

$$4) \text{ Operating Ratio} = \frac{\text{Costs + Operating Expenses}}{\text{Net Sales}} \times 100$$

This ratio expresses the relationship between operating costs & net sales. It is used to check the efficiency of the business & its profitability.



5) Return on Capital Employed / Return on Investment (ROI)

$$= \frac{\text{Earning Before Interest \& Tax (EBIT)}}{\text{Capital Employed}} \times 100$$

Capital Employed = Total Assets - liabilities
(Total fund Employed)
It measures how well a company is able to generate profits from its capital.

6) Return on Net worth / Return on Shareholders fund / Return on owners fund. / Return on Proprietor fund

$$= \frac{\text{NPAT}}{\text{owners fund}} \times 100$$

It indicates whether the investment done by the shareholders are able to generate profitable returns or not. It should always be higher than the return on investment which otherwise would indicate that the company funds are not utilized properly.

7) Return on Equity share Capital.

$$= \frac{\text{NPAT - Preference Dividend}}{\text{Paid up Equity share Capital}}$$

This ratio indicates whether the returns for the equity shareholders of the company are satisfactory or not.



8) Earning Per share =

$$= \frac{\text{NPAT} - \text{Pref. Dividend}}{\text{No. of Equity Shares}}$$

It shows the Company's revenue concerning one share. It is helpful to investors for decision making about the purchasing / sale of shares. If EPS is high, the Company's stock price will be increased.

9) Dividend Payout Ratio.

$$= \frac{\text{Dividend Per share}}{\text{Earning Per share}}$$

10) Price Earning Ratio

$$= \frac{\text{Market Price Per share}}{\text{Earning per price per share}}$$

Leverage Ratio / Solvency Ratio

1) Debt Equity Ratio = $\frac{\text{Long Term Debt}}{\text{Shareholder's fund}}$

1) Standard = 2:1

2) It shows the proportion of equity & debt a Company is using to finance its assets.

3) If ratio is less than 2:1 will indicate that the firm is not taking any risk & mainly using Shareholder's fund for financing its requirements.

4) If it's greater than 2:1, it may prove to be more risky in the future & hence a firm should keep a constant watch on this ratio.



2) Interest Coverage Ratio

$$= \frac{\text{EBIT (EBDT)}}{\text{Interest Expenses}}$$

=> Higher interest coverage Ratio imply the greater ability of the firm to pay off its interest.

=> If interest coverage is less than 1, then EBDT is insufficient to pay off interest, implying finding other ways to arrange funds.

3) Debt Service Coverage Ratio (DSCR)

$$= \frac{\text{EBIT (Operating Income) (EBDT)}}{\text{Interest + principle payment}}$$

= It signifies the ability of the firm to pay interest & principle amt (EMI) or all obligations related to debt in a year

= If less than 1 implies that the operating cash flows are insufficient for debt servicing, indicating negative cash flows.

4) Capital Gearing Ratios.

= Funds bearing fixed interest / fixed Dividend
Equity ~~owner~~ Shareholders fund

= Pref share Capital + Debenture + Loans + Bonds

$$= \frac{\text{ESC + R+S}}{\text{...}}$$

25 : 1 : 50 : 1 = Ideal



~~inverse of 10~~

$$\begin{aligned} 5) \text{ Proprietary Ratio} &= \frac{\text{Total Assets}}{\text{Proprietors fund}} \\ &= \frac{CA + FA - \text{Liabilities}}{\text{Assets}} \end{aligned}$$

It shows the proportion of total assets of a company which are financed by proprietors fund.

60 - 75%

If it is more than 75% means sufficient comfort for creditors since it points towards lesser dependence on external sources.

Activity Ratio / Turnover Ratios

1) Stock / Inventory Turnover Ratio.

$$= \frac{\text{COGS}}{\text{Average Stock}}$$

$$\text{Average Stock} = \frac{\text{OIP Stock} + \text{clo Stock}}{2}$$

> This ratio indicates the number of times the finished stock is turned into cash during a given accounting period.

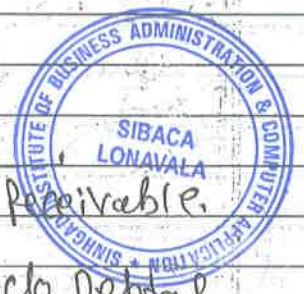
- Higher Ratio shows rapid turnover of stock & consequently shorter holding period.

> Lower ratio indicates stock is slow moving & there is a longer holding period.

2) Debtors Turnover Ratio.

$$= \frac{\text{Credit Sales}}{\text{Average Debtors / Accounts Receivable}}$$

$$\text{Average Debtors} = \frac{\text{OIP Debtors} + \text{clo Debtors}}{2}$$



Debtal Collection Period : 12

h)

Debtal Turnover
Ratio

⇒ It shows how quickly credit sales are converted into cash. It measures the efficiency of the firm in managing & collecting the credit issued to the customers.

⇒ Higher the Debtors Turnover Ratio, better is the credit management of the firm. lower is the collection period lower Ratio, higher collection period.

3) Creditors Turnover Ratio

$$\frac{\text{Credit Purchase}}{\text{Average Accounts Payable}} \times \text{time}$$

Credit Payment Period : 12

months

Credit Turnover
Ratio

Payment Period should be more, i.e. Ratio should be Higher

⇒ If Credit payment period is

⇒ If Credit Turnover Ratio is high, it indicates that there is not much promptness in the payment made to creditors & need to be improved

⇒ If Credit Turnover Ratio is low, that means payment to creditors is quite prompt, but the firm is not taking full advantage of the credit allowed by the creditors



er

$$4) \text{ Total Assets Turnover Ratio} = \frac{\text{Net Sales}}{\text{Average total assets}}$$

ing

$$5) \text{ Working Capital Turnover Ratio} = \frac{\text{Net Sales}}{\text{Net working Capital}}$$

ended

turnover

h.
ch



Q.1
Ans:-

Statement of Working Capital Requirement

Q.2
Ans:-

A) Current Assets

A) (

1) Stock

1) U

2) R

3) W

4) R

5) D

6) D

7) F

8) De

9) 3)

a) RM $(104000 \times 100 \times \frac{4}{52})$ 800,000

b) W.T.P

RM $(104000 \times 100 \times \frac{2}{52} \times 100\%)$ 400,000

D.L $(104000 \times 40 \times \frac{2}{52} \times 50\%)$ 80,000

D.OH $(104000 \times 80 \times \frac{2}{52} \times 50\%)$ 1,60,000 6,40,000

c) finished Stock $(104000 \times 220 \times \frac{4}{52})$ 17,60,000

less

2) Debtors $(104000 \times 240 \times \frac{8}{52})$ 38,40,000

1)

3) Cash 25,000

2)

Total Current Assets 70,65,000

3)

less B) Current liabilities

1) Creditors $(104000 \times 100 \times \frac{4}{52})$ 800,000

2) ols wages $(104000 \times 40 \times \frac{1.5}{52})$ 1,20,000

Total Current liabilities 9,20,000

*

Net working Capital 61,45,000

*



Q.2
Answer Statement of Working Capital

A) Current Assets

1)	Stock			
a)	RM	$54000 \times 50 \times \frac{1}{12}$		225,000
b)	WIP			
	RM	$54000 \times 50 \times \frac{0.5}{12} \times 100\%$	11,350	
	D.L	$54000 \times 20 \times \frac{0.5}{12} \times 50\%$	22,500	
	D.OH	$54000 \times 30 \times \frac{0.5}{12} \times 50\%$	33,750	1,68,750
c)	FM	$54000 \times 100 \times \frac{1}{12}$		4,50,000
2)	Debtors	$54000 \times 130 \times \frac{1}{12} \times 75\%$		4,38,750
3)	Cash			1,00,000
1000		<u>Total Current Assets</u>		<u>13,82,500</u>

less B) Current liabilities

100	1)	Creditors = $54000 \times 50 \times \frac{1}{12}$		225,000
00	2)	OHs wages = $54000 \times 20 \times \frac{10}{360}$		30,000
100	3)	OHs OHs = $54000 \times 30 \times \frac{1}{12}$		1,35,000
		<u>Total Current liabilities</u>		<u>3,90,000</u>
10		<u>Net Working Capital</u>		<u>9,92,500</u>

* Debtors can also be calculated at cost basis instead of selling price basis.
* If in the exam, they specially mention that calculate Debtors on sales basis then calculate it on sales basis otherwise, calculate the same on at cost basis.



Sums on Fund Flow Statement

Problem 1:

From the following information relating to A Ltd., prepare Funds Flow Statement:

(Rs. '000)

	2003 Rs.	2004 Rs.		2003 Rs.	2004 Rs.
Share Capital	300	400	Cash	30	90
Reserve	100	50	Accounts Receivable	105	150
Retained Earnings	30	60	Inventories	150	195
Accounts Payable	45	135	Fixed Assets	190	210
	475	645		475	645

Additional Information :

(a) The company issued bonus shares for Rs. 50,000 and for cash Rs. 50,000.

(b) Depreciation written off during the year Rs. 15,000.

(B Com M.S.)

SOLUTION :

SCHEDULE OF CHANGES IN WORKING CAPITAL

	2003 Rs.	2004 Rs.	Changes in Working Capital	
			Increase Rs.	Decrease Rs.
Current Assets:				
Cash	30,000	90,000	60,000	—
Accounts Receivable	1,05,000	150,000	45,000	—
Inventories	1,50,000	1,95,000	45,000	—
	2,85,000	4,35,000		
Less: Current Liabilities:				
Accounts Payable	45,000	1,35,000	—	90,000
Working Capital	2,40,000	3,00,000		
Increase in Working Capital	60,000	—	—	60,000
	3,00,000	3,00,000	1,50,000	1,50,000

FUND FLOW STATEMENT for the year ended 31-12-2004

	Rs.		Rs.
Issue of Share	50,000	Purchase of Fixed Assets	35,000
Funds from Operation	45,000	Increase in Working Capital	60,000
	95,000		95,000

Workings :

FIXED ASSETS A/C

	Rs.		Rs.
To Balance b/d	1,90,000	By Adjusted P & L A/c (Depreciation)	15,000



To Cash (Purchase)	35,000	By Balance c/d	2,10,000
	2,25,000		2,25,000

SHARE CAPITAL A/C

To Balance c/d	Rs 4,00,000	By Balance b/d	Rs 3,00,000
		By Cash	50,000
		By General Reserves (Bonus Shares)	50,000
	4,00,000		4,00,000

ADJUSTED PROFIT & LOSS A/C

To Fixed Assets (Depreciations)	Rs 15,000	By Balance b/d	Rs 30,000
To Balance c/d	60,000	By Fund from Operation	45,000
	75,000		75,000

Problem 2:

Ramco Cements presents the following information and you are required to calculate funds from operations:

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Operation Expenses	1,00,000	By Gross Profit	2,00,000
To Depreciation	40,000	By Gain on Sale of Plant	20,000
To Loss on Sale of Building	10,000		
To Advertisement Suspense Account	5,000		
To Discount Allowed	500		
To Discount on Issue of Shares written off	500		
To Goodwill written off	12,000		
To Net Profit	52,000		
	2,20,000		2,20,000



SOLUTION :**CALCULATION OF FUND FROM OPERATIONS**

	<i>Rs.</i>	<i>Rs.</i>
Net Profit (given)		52,000
<i>Add :</i> Non-fund or non-operating items which have been debited to Profit & Loss A/c :		
Depreciation	40,000	
Loss on Sale of Building	10,000	
Advertisement written off	5,000	
Discount written off	500	
Goodwill written off	12,000	67,500
		1,19,500
<i>Less :</i> Non-fund or non-operating items which have been credited to Profit & Loss A/c :		
Gain on Sale of Plant	20,000	20,000
FUNDS FROM OPERATIONS		99,500

Alternatively :

ADJUSTED PROFIT AND LOSS ACCOUNT

	<i>Rs.</i>		<i>Rs.</i>
To Depreciation	40,000	By Opening Balance	—
To Loss on Sale of Building	10,000	By Gain on Sale of Plant	20,000
To Advertisement Suspense A/c	5,000	By Funds from Operations	99,500
		(Balancing figure)	
To Discount written off	500		
To Goodwill written off	12,000		
To Closing Balance	52,000		
	1,19,500		1,19,500



Problem 3:

The Balance Sheets of National Co. as on 31st December, 2003 and 31st December 2004 are as follows:

<i>Liabilities & Capital</i>	<i>2003 Rs</i>	<i>2004 Rs</i>	<i>Assets</i>	<i>2003 Rs</i>	<i>2004 Rs</i>
Share Capital	5,00,000	7,00,000	Land and Buildings	80,000	1,20,000
Profit & Loss	1,00,000	1,60,000	Plant and Machinery	5,00,000	8,00,000
General Reserve	50,000	70,000	Stock	1,00,000	75,000
Sundry Creditors	1,53,000	1,90,000	Debtors	1,50,000	1,60,000
Bills Payable	40,000	50,000	Cash	20,000	20,000
Expenses O/S	7,000	5,000			
	8,50,000	11,75,000		8,50,000	11,75,000

Additional Information:

- (1) Rs. 50,000 depreciation has been charged on Plant and Machinery during 2004.
- (2) A piece of Machinery was sold for Rs. 8,000 during the year 2004. It had cost Rs. 12,000; depreciation of Rs. 7,000 had been provided on it.

Prepare a Schedule of changes in Working Capital and a Statement showing the Sources and Application of Funds for 2004.



SOLUTION :

SCHEDULE OF CHANGES IN WORKING CAPITAL

Items	2003 Rs.	2004 Rs.	Changes in Working Capital	
			Increase Dr. Rs.	Decrease Cr Rs.
Current Assets :				
Stock	1,00,000	75,000	—	25,000
Debtors	1,50,000	1,60,000	10,000	—
Cash	20,000	20,000	—	—
	2,70,000	2,55,000	—	—
Current Liabilities :				
Sundry Creditors	1,53,000	1,90,000	—	37,000
Bills Payable	40,000	50,000	—	10,000
Expenses O/S	7,000	5,000	2,000	—
	2,00,000	2,45,000		
Working Capital	70,000	10,000		
Net Decrease in Working Capital		60,000	60,000	
	70,000	70,000	72,000	72,000

STATEMENT OF SOURCE AND APPLICATION OF FUNDS
for the year ended 31st December 2000

Sources	Rs.	Applications	Rs.
Funds from Operations (1)	1,27,000	Purchase of Land and Buildings	40,000
Issue of Shares	2,00,000	Purchase of Plant and Machinery (2)	3,55,000
Sale proceeds of Machinery	8,000		
Decrease in Working Capital	60,000		
	3,95,000		3,95,000

Workings :

(1) ADJUSTED PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Plant & Machinery A/c (Depreciation of 2000)	50,000	By Balance b/d (Opening Balance)	1,00,000
To General Reserve (Transferred during 2000)	20,000	By Plant & Machinery (Profit on Sale)	3,000
To Balance c/d	1,60,000	By Funds from Operation (Balancing figure)	1,27,000
	2,30,000		2,30,000



(2) PLANT AND MACHINERY ACCOUNT

	Rs.		Rs.
To Balance b/d	5,00,000	By Bank (Sale of Machinery)	8,000
To Profit & Loss A/c (profit on sale)	3,000	By Profit & Loss A/c (Depreciation)	50,000
To Bank A/c (Purchase of Machinery & Plant (Balancing figure)	3,55,000	By Balance c/d	8,00,000
	8,58,000		8,58,000



Problem 4:**From the following Balance Sheets of X Ltd. make out:****(i) Statement of Changes in Working Capital (ii) Fund Flow Statement:****BALANCE SHEETS**

<i>Liabilities</i>	<i>2003 Rs.</i>	<i>2004 Rs.</i>	<i>Assets</i>	<i>2003 Rs.</i>	<i>2004 Rs.</i>
Equity Share Capital	3,00,000	4,00,000	Goodwill	1,15,000	90,000
Redeemable Preference Share Capital	1,50,000	1,00,000	Land & Buildings	2,00,000	1,70,000
General Reserve	40,000	70,000	Plant	80,000	2,00,000
Profit & Loss	30,000	48,000	Debtors	1,60,000	2,00,000
Proposed Dividend	42,000	50,000	Stock	77,000	1,09,000
Creditors	55,000	83,000	Bills Receivable	20,000	30,000
Bills Payable	20,000	16,000	Cash in hand	15,000	10,000
Provision for Taxation	40,000	50,000	Cash at Bank	10,000	8,000
	6,77,000	8,17,000		6,77,000	8,17,000

Additional Information :

(1) Depreciation of Rs. 10,000 and Rs. 20,000 have been charged on Plant and Land and Buildings respectively in 2004.

(2) A dividend of Rs. 20,000 has been paid in 2004.

(3) Income-tax of Rs. 35,000 has been paid during 2004.

*(B.Com. Hons. Delhi)***SOLUTION :****STATEMENT OF CHANGES IN WORKING CAPITAL**

	<i>2003 Rs.</i>	<i>2004 Rs.</i>	<i>Changes in Working Capital</i>	
			<i>Increase Dr. Rs.</i>	<i>Decrease Cr. Rs.</i>
Current Assets :				
Debtors	1,60,000	2,00,000	40,000	—
Stock	77,000	1,09,000	32,000	—
Bills Receivable	20,000	30,000	10,000	—
Cash in hand	15,000	10,000	—	5,000
Cash at Bank	10,000	8,000	—	2,000
	2,82,000	3,57,000		



<i>Current Liabilities :</i>				
Creditors	55,000	83,000	—	28,000
Bills Payable	20,000	16,000	4,000	
	75,000	99,000		
Working Capital	2,07,000	2,58,000		
Increase in				
Working Capital	51,000	—	—	51,000
	2,58,000	2,58,000	86,000	86,000

FUND FLOW STATEMENT

<i>Sources of Fund</i>	<i>Rs.</i>	<i>Application of Fund</i>	<i>Rs.</i>
Fund from Operation (c)	1,76,000	Purchase of Plant (a)	1,30,000
Issue of Equity Shares	1,00,000	Redemption of Preference Shares	50,000
Sale of Land and Buildings (b)	10,000	Payment of Dividend	20,000
		Payment of Income Tax	35,000
		Increase in Working Capital	51,000
	2,86,000		2,86,000

Workings :

(a) PLANT ACCOUNT

	<i>Rs.</i>		<i>Rs.</i>
To Balance b/d	80,000	By Profit & Loss A/c (Depreciation)	10,000
To Bank (Purchase of Plant) (Balancing figure)	1,30,000	By Balance c/d	2,00,000
	2,10,000		2,10,000

(b) LAND AND BUILDING ACCOUNT

	<i>Rs.</i>		<i>Rs.</i>
To Balance b/d	2,00,000	By Profit & Loss A/c (Depreciation)	20,000
		By Bank (Sale of Land & Buildings)	10,000
		By Balance c/d	1,70,000
	2,00,000		2,00,000

(c) ADJUSTED PROFIT AND LOSS ACCOUNT

	<i>Rs.</i>		<i>Rs.</i>
To General Reserve	30,000	By Balance b/d	30,000
To Dividend (d)	28,000	By Funds from Operations	1,76,000
To Provision for Taxation(e)	45,000		
To Goodwill	25,000		
To Depreciation :			
Plant	10,000		
Land	20,000		
To Balance c/d	48,000		
	2,06,000		2,06,000



(d) PROPOSED DIVIDEND ACCOUNT

	<i>Rs.</i>		<i>Rs.</i>
To Bank A/c	20,000	By Balance b/d	42,000
To Balance c/d	50,000	By Profit & Loss A/c	
		(Balancing figure)	28,000
	70,000		70,000

(e) PROVISION FOR TAXATION ACCOUNT

	<i>Rs.</i>		<i>Rs.</i>
To Bank A/c	35,000	By Balance b/d	40,000
To Balance c/d	50,000	By Profit & Loss A/c	
		(Balancing figure)	45,000
	85,000		85,000

Problem 5

The following are the summarised Balance Sheets of a company as on 31st December 2003 and 2004:

<i>Liabilities</i>	<i>31-12-2003</i>	<i>31-12-2004</i>
	<i>Rs.</i>	<i>Rs.</i>
Equity Share Capital	2,00,000	2,40,000
8% Debentures	50,000	—
Securities Premium	—	10,000
General Reserve	30,000	50,000
Profit & Loss Account	48,000	68,000
Sundry Creditors	1,30,000	1,50,000
Proposed Dividend	20,000	24,000
<i>Provision for Depreciation:</i>		
Plant & Machinery	1,40,000	1,50,000
Furniture	6,000	4,000
	6,24,000	6,96,000
<i>Assets</i>		
Land and Buildings	1,05,000	1,50,000
Plant and Machinery (at cost)	2,90,000	3,20,000
Furniture (at cost)	9,000	10,000
Inventories	1,30,000	1,05,000
Sundry Debtors	75,000	85,000
Cash	15,000	26,000
	6,24,000	6,96,000



Additional information is as follows:

(1) Furniture which cost Rs. 5,000, written down value Rs. 1,000 was sold during the year 2004 for Rs. 2,000.

(2) Plant and Machinery which cost Rs. 20,000 and in respect of which Rs. 13,000 had been written off as depreciation was sold during the year for Rs. 3,000.

(3) The dividend of 2003 was paid during 2004.

You are required to prepare (a) a Statement of changes in working capital during 2004 and (b) Funds flow statement for the year 2004.



SOLUTION :

STATEMENT OF CHANGES IN WORKING CAPITAL

	2003 Rs.	2004 Rs.	Effect on Working Capital	
			Increase Rs.	Decrease Rs.
Current Assets :				
Cash	15,000	26,000	11,000	—
Sundry Debtors	75,000	85,000	10,000	—
Inventories	1,30,000	1,05,000	—	25,000
	2,20,000	2,16,000		
Current Liabilities :				
Sundry Creditors	1,30,000	1,50,000	—	20,000
	1,30,000	1,50,000		
Working Capital	90,000	66,000		
Net decrease in Working Capital	—	24,000	24,000	—
	90,000	90,000	45,000	45,000

FUNDS FLOW STATEMENT
for the year ended 31st December 2004

Sources	Rs.	Applications	Rs.
Issue of Share Capital	40,000	Redemption of Debentures	50,000
Securities Premium	10,000	Purchase of Land & Buildings	45,000
Sale of Furniture	2,000	Purchase of Plant and Machinery	50,000
Sale of Plant and Machinery	3,000	Purchase of Furniture	6,000
Funds from Operations	92,000	Dividend paid for	20,000
Net decrease in working capital	24,000		
	1,71,000		1,71,000

Workings:

PROVISION FOR DEPRECIATION ON PLANT & MACHINERY

	Rs.		Rs.
To Plant & Machinery (on sold machinery)	13,000	By Balance b/d	1,40,000
To Balance c/d	1,50,000	By Adjusted P & L A/c (Depreciation provided during the year)	23,000
		(Balancing figure)	
	1,63,000		1,63,000

PLANT AND MACHINERY ACCOUNT

	Rs.		Rs.
To Balance b/d	2,90,000	By Cash (Sales)	3,000
To Cash (Purchase)	50,000	By Provision for Depreciation on Plant and Machinery	13,000
(Balancing figure)		By Adjusted P & L A/c (Loss on sale)	4,000
		By Balance c/d	3,20,000
	3,40,000		3,40,000



PROVISION FOR DEPRECIATION ON FURNITURE A/C

To Furniture A/c (Depreciation on furniture sold)	<i>Rs.</i> 4,000	By Balance b/d	<i>Rs.</i> 6,000
To Balance c/d	4,000	By Adjusted P & L A/c (Balancing figure)	2,000
	8,000		8,000

FURNITURE ACCOUNT

To Balance b/d	<i>Rs.</i> 9,000	By Cash (Sales)	<i>Rs.</i> 2,000
To Adjusted P & L A/c (Profit on Sale)	1,000	By Provisions for depreciation	4,000
To Cash (Purchase)	6,000	By Balance c/d	10,000
	16,000		16,000

ADJUSTED PROFIT & LOSS ACCOUNT

To Transfer to General Reserve	<i>Rs.</i> 20,000	By Balance b/d	<i>Rs.</i> 48,000
To Proposed Dividend (2000)	24,000	By Profit on Sale of Furniture	1,000
To Provision for Depreciation : Plant & Machinery	23,000	By Funds from Operations	92,000
Furniture	2,000		
To Loss on Sale of Plant	4,000		
To Balance c/d	68,000		
	1,41,000		1,41,000



Problem 6:

Following are the comparative Balance Sheets of Good Luck Co. as at 31st December:

Liabilities	2003 Rs.	2004 Rs.	Assets	2003 Rs.	2004 Rs.
Share Capital	10,00,000	11,00,000	Goodwill	50,000	40,000
Debentures	5,00,000	3,00,000	Land & Buildings	4,20,000	6,60,000
General Reserve	2,00,000	2,00,000	Plant and Machinery	6,00,000	8,00,000
Profit & Loss	1,10,000	1,90,000	Stock	2,50,000	2,10,000
Income Tax Provisions	40,000	1,10,000	Debtors	3,00,000	2,40,000
Creditors	50,000	40,000	Cash	3,00,000	24,000
Bills Payable	20,000	30,000	Preliminary Expenses	30,000	20,000
Provision for Doubtful Debts	30,000	24,000			
	19,50,000	19,94,000		19,50,000	19,94,000

Additional Information :

- During the year 2004, a part of machinery costing Rs. 7,500 (Accumulated depreciation thereon being Rs. 2,500) was sold for Rs. 3,000.
- Dividend for Rs. 1,00,000 was paid during the year ended 31st December 2004.
- Income Tax Rs. 50,000 was paid during the year 2004.
- Depreciation for the year 2004 was provided as follows :

	Rs.
Land and Buildings	10,000
Plant and Machinery	50,000

You are required to prepare :

- A schedule of change in Working Capital and
- A Statement showing the Sources and Application of Funds. (CA M.Com. Utkal, Poona)

SOLUTION :

SCHEDULE OF CHANGES IN WORKING CAPITAL

Items	2003 Rs.	2004 Rs.	Changes in Working Capital	
			Increase Dr. Rs.	Decrease Cr. Rs.
Current Assets :				
Closing Stock	2,50,000	2,10,000	—	40,000
Debtors, less Provision	2,70,000	2,16,000	—	54,000
Cash	3,00,000	24,000	—	2,76,000
	8,20,000	4,50,000		



<i>Current Liabilities :</i>				
Creditors	50,000	40,000	10,000	—
Bills Payable	20,000	30,000	—	10,000
	70,000	70,000		
Working Capital	7,50,000	3,80,000		
Net Decrease in Working Capital	—	3,70,000	3,70,000	—
	7,50,000	7,50,000	3,80,000	3,80,000

FUNDS FLOW STATEMENT

<i>Sources</i>	<i>Rs</i>	<i>Applications</i>	<i>Rs</i>
Funds from Operations (3)	3,82,000	Payment of Dividend	1,00,000
Sale of Machinery	3,000	Payment of Income Tax	50,000
Issue of Share Capital	1,00,000	Purchase of Land and Buildings (2)	2,50,000
Decrease in Working Capital	3,70,000	Purchase of Plant and Machinery (1)	2,55,000
		Redemption of Debentures	2,00,000
	8,55,000		8,55,000

Workings :

(1) PLANT AND MACHINERY ACCOUNT

	<i>Rs.</i>		<i>Rs.</i>
To Balance b/d	6,00,000	By Bank (Sales)	3,000
To Bank (Purchase)	2,55,000	By Profit & Loss A/c (Loss on Sale)	2,000
(Balancing figure)		By Profit & Loss A/c (Depreciation)	50,000
		By Balance c/d	8,00,000
	8,55,000		8,55,000

(2) LAND AND BUILDING ACCOUNT

	<i>Rs</i>		<i>Rs.</i>
To Balance b/d	4,20,000	By Profit & Loss A/c (Depreciation)	10,000
To Bank (Purchase)	2,50,000	By Balance c/d	6,60,000
(Balancing figure)	6,70,000		6,70,000

(3) ADJUSTED PROFIT AND LOSS ACCOUNT

	<i>Rs</i>		<i>Rs.</i>
To Depreciation :		By Balance b/d	1,10,000
Machinery	50,000	By Funds from Operations	3,82,000
Land & Buildings	10,000		
To Dividends	1,00,000		
To Income Tax Provision (4)	1,20,000		



To Loss on Sale of Machinery	2,000		
To Goodwill Written Off	10,000		
To Preliminary Expenses Written Off	10,000		
To Balance c/d	1,90,000		
	4,92,000		4,92,000

(4) INCOME TAX PROVISION ACCOUNT

	<i>Rs.</i>		<i>Rs.</i>
To Bank (Payment)	50,000	By Balance b/d	40,000
To Balance c/d	1,10,000	By Profit & Loss A/c (Balancing figure)	1,20,000
	1,60,000		1,60,000



Fund Flow Statement

Definition: Fund Flow Statement summarises the movements of funds in the business between the two accounting periods. It provides analytical data about the procurement and utilization of funds.

Three statements are prepared during the fund flow analysis:

1. Statement of Changes in Working Capital
2. Funds from Operations or Adjusted Profit and Loss Account
3. Fund flow Statement

Objectives of Fund Flow Statement

Primarily the Fund Flow Statement is used to assess the cause of funds inflow and outflow. The objectives of the Fund Flow Statement is to:

- Estimate the working capital of the undertaking.
- Find out the changes and causes of changes in working capital.
- Perform a comparative study of the business's financial position.
- Know the sources of the inflow of funds.
- Learn where the funds are being used.
- Formulate the policies for the financial soundness of the firm.
- Attain financial control over the business.
- Track and control the key resource of the company.

How to prepare Funds Flow Statements?

Firstly, we analyze the changes in working capital. The statement shows an increase/decrease in current assets and liabilities between the two years.

Accounting Treatment in Fund Flow Statement:

- The net increase in working capital under the application of funds.
- A decrease in working capital under the sources of funds.



Format of Changes in Working Capital

Statement of Changes in Working Capital (for the year ended _____)

Particulars	Previous Year	Current Year	Working Capital Changes	
			Increase	Decrease
Current Assets:	(₹)	(₹)	(₹)	(₹)
Cash in Hand				
Cash at Bank				
Short-term Investment (Marketable Securities)				
Sundry Debtors				
Bills Receivable				
Accrued Income				
Prepaid Expenses				
Stock-in-trade				
Other Current Assets				
(A)				
Current Liabilities:				
Sundry Creditors				
Bills Payable				
Outstanding Expenses				
Income received in advance				
Bank Overdraft				
Other Current Liabilities				
(B)				
Working Capital (A – B)				
Increase/Decrease in Working Capital				

Secondly, we calculate the funds from operations. It depicts an increase or decrease in working capital due to operating activities.

We can calculate it by preparing:-

1. Statement of Funds Flow from Operations, or
2. Adjusted Profit and Loss Account

Accounting Treatment in Fund Flow Statement:

- Funds from operations appear under sources of funds.
- Funds lost in operations appear under the application of funds.



Format of Funds from Operations

Dr	Adjusted Profit & Loss Account		Cr
Particulars	Amount	Particulars	Amount
	(₹)		(₹)
To Depreciation		By Balance b/d (Balance of P & L A/c at the end of the previous year)	
To Loss on Sale of Fixed Assets		By Profit Sale of Fixed Assets	
To Loss on Sale of Long-term Investments		By Profit on Long-term Investments	
To Preliminary Expenses written off		By Refund of Tax	
To Goodwill written off		By Dividend on Investment	
To Discount on Debentures written off		By Funds from Operations (Balancing figure)	
To Provision for Taxation			
To Dividend/Interim Dividend			
To Proposed Dividend			
To Transfer to General Reserve			
To Transfer to Sinking Fund			
To Balance c/d (Balance of P & L A/c at the end of the current year)			

Funds Flow from Operations (for the _____)

Particulars	Amount(₹)	
Net Profit after Tax for the Year		xxxxxx
<i>Add: Non-Operating Expenses</i>		
Depreciation	xxx	
Loss on Sale of Fixed Assets	xxx	
Interest on Debentures	xxx	
Goodwill Written off	xxx	
Provision for Taxation	xxx	
Proposed Dividend	xxx	
Dividend/Interim Dividend	xxx	
Transfer from P & L A/c	xxx	xxxxxx
<i>Less: Non-Operating Incomes</i>		
Interest on Investments	xxx	
Dividend on Investment	xxx	
Profit Sale of Fixed Assets	xxx	
Interest on Bank Deposits	xxx	
Refund of Tax	xxx	(xxxxxx)
Net Fund Flow from Operations		xxxxxx



The **third or final step** in the process is making the fund flow statement. The fund's statement has two separate sections, that is:

1. **Sources of Funds:** It depicts the items responsible for the inflow of funds into the business.
2. **Application of Funds:** This section shows the outflow of funds from the business.

Format of Fund flow Statements in the form of an account

Funds Flow Statements (for the year ended_____)

Particulars	Amount(₹)
<i>Sources:</i>	
Fund from Operations	
Issue of Shares Capital	
Issue of Debentures	
Raising Long Term Loans	
Sale of Fixed Assets	
Sale of Long Term Investments	
Non-Trading Income (Dividend)	
Decrease in Working Capital	
Total	
<i>Application:</i>	
Fund Lost in Operations	
Redemption of Preference Share Capital	
Redemption of Debentures	
Payment of Long-term Loan	
Purchase of Fixed Assets	
Purchase of Long-term Investments	
Payment of Dividend	
Payment of tax (if treated as appropriation of profit)	
Increase in Working Capital	
Total	



Adjusted Profit & Loss Account			
Dr			Cr
Particulars	Amount	Particulars	Amount
	(₹)		(₹)
To Depreciation		By Balance b/d (Balance of P & L A/c at the end of the pervious year)	
To Loss on Sale of Fixed Assets		By Profit Sale of Fixed Assets	
To Loss on Sale of Long-term Investments		By Profit on Long-term Investments	
To Preliminary Expenses written off		By Refund of Tax	
To Goodwill written off		By Dividend on Investment	
To Discount on Debentures written off		By Funds from Operations	
To Provision for Taxation		(Balancing figure)	
To Dividend/Interim Dividend			
To Proposed Dividend			
To Transfer to General Reserve			
To Transfer to Sinking Fund			
To Balance c/d (Balance of P & L A/c at the end of the current year)			

Points to Remember

One must consider the following points while preparing funds flow statements:

- Always prepare the changes in working capital first.
- The funds flow statement and operations funds must be prepared simultaneously.
- Provide necessary working notes for the adjustments.



Importance of the fund flow statements

The fund flow statements are helpful to the firm's stakeholders. As it conveys vital information about the business. The importance or uses of fund flow statements are as follows:

Management

Fund Flow Statements helps managements in the following ways:

1. It helps management to determine the plan of action for the future.
2. The fund flow analysis enables optimum resource allocation.
3. After analyzing the application of funds, management can formulate its dividend policy.
4. The management can analyze and improve its working capital positions.
5. It depicts the firm's financial position, which helps get loans easily.

Investors

Investors can get some vital information about the firm like:-

1. Abilities of the firms to pay them dividend
2. Firms capabilities to pay their obligations
3. Effective sourcing and usage of the funds

Creditors

Fund flow statements provide the actual financial position of the business. The creditors can find out the companies' capabilities of repaying their debts. It includes the short and long term liabilities of the business.

Government

The government uses these statements to know the firm's capital budgeting sources. The government forms industrial policies based on the data given in this statement. Fund flow statements also help the government in capital control.

Financial Institutions

The financial institutions seek information about the firm's liquidity and profitability. They get this information by way of Fund flow statements.

Researchers

To assess the financial soundness of business, researchers use various financial statements. Fund flow statements help derive conclusions about the financial position of enterprises.

Limitations of Fund Flow Statements

- Only provides additional information about funds. Therefore it cannot be the substitute of the financial statements.
- It uses historical data, so it is not prepared with much accuracy.
- These statements only cover changes in working capital, not the cash. However, analyzing changes in cash is a must.
- Important non-fund transactions are not included in these statements

Fund Flow Statement

- Q. The following is summarised Balance Sheet as on 31st March 2018 & 2019 of the Company. Prepare a schedule of changes in working Capital & fund flow Statement for the year ended 31st March 2019

Liabilities	2018	2019	Assets	2018	2019
Share Capital	80000	90000	Machinery	26000	38000
P & L A/c.	13000	24000	Building	45000	45000
Long Term loans	1000	5000	Stock	10000	7000
Sundry Creditors	8000	5000	S. Debtors	16000	22000
			Cash in Hand	5000	12000
	102000	124000		102000	124000

Ans: Statement of changes in Working Capital

Particulars	2018	2019	Increase in W.C	Decrease in W.C
A) Current Assets				
Stock	10000	7000		3000
Sundry Debtors	16000	22000	6000	
Cash in Hand	5000	12000	7000	
Total Current Assets	31000	41000		
less B) Current Liabilities				
Sundry Creditors	8000	5000	3000	
Total Current Liabilities	8000	5000		
Net Working Capital	23000	36000	16000	3000
Increase in W.C	13000			13000
	36000	36000	16000	16000

Adjusted Profit & Loss Account

Particulars	Rs	Particulars	Rs
		By Balance B/d	13000
		By funds from operation	11000
To Balance c/d	24000		24000
	24000		
	=		=



Funds from flow Statement (for the year ended 2019)

Sources of funds	Rs	Application of funds	Rs		
Share Capital	10000	Purchase of Machinery	12000		
Long term loan	4000	Net increase in			
funds from operation	11000	working Capital	13000		
	25000		25000		
	=		=		

Following are the summarised Balance Sheet of Abhijit Ltd, as on 31st March 2018 & 2019. You are required to prepare a fund flow statement for the year ended 31st March 2019.

Balance sheet

Liabilities	2018	2019	Assets	2018	2019		
Share Capital	100000	125000	Goodwill	-	2500	To	Dr
GLR	25000	30000	Lt B	100000	95000	To	Dr
P & L A/c	15250	15300	P & M	75000	84500	To	Dr
Bank loan	35000	67600	Stock	50000	37000	To	Dr
Creditors	75000	-	Debtors	40000	32000	To	Dr
Prov. for tax	15000	17500	Cash in Hand	250	4300		
	265250	255400		265250	255400		

Additional Information

- 1) Depreciation written off on P & M Rs 7000 & on Lt B Rs 5000
- 2) Provision for tax was made during the year Rs 16,500
- 3) Dividend of Rs 11,500 was paid.



ANS Statement of changes in Working Capital

Particulars	2018	2019	↑ in WC	↓ in WC
A) Current Assets				
Stock	50000	37000		13000
Debtors	40000	32100		7900
Cash in Hand	250	4300	4050	
Total CA	90250	73400		
B) Current Liabilities				
Creditors	75000	-	75000	
Total CL	75000	73400	79050	20900
Net W.C. (CA-CL)	15250	73400	79050	20900
↑ in W.C.	58150			58150
	73400	73400	79050	79050

Adjusted P+L A/c		A/c	
Particulars	Am't	Particulars	Am't
Issue of S. Capital	25000	By Bal Bld	15250
To Tr. to A/R	5000		
To Prov. for Tax	16500	By funds from operation	45050
To Dividend	11500		
To Dep on P+M	7000		
To Dep on L+B	5000		
To clo Bal / Bal cld	15300		
	60300		60300
	=		=

Fund Flow Statement			
Sources of funds	Rs	Application of funds	Rs
Issue of S. Capital	25000	Payment of Tax	14000
Raising B. loan	32600	Goodwill	2500
Funds from operation	45050	↑ in W. Capital	58150
		Payment of Dividend	11500
		Purchase of P+M	16500
	102650		102650
	=		=



Plant & Machinery Acc

To Bal Bld	75000	By Dep. Acc	7000	Dr
To Bank Acc	(16500)	By Bal cld	84500	A)
	91500		91500	
	=		=	

Land & Building Acc

To Bal Bld	100000	By Dep.	5000	
		By Bal cld	95000	
	100000		100000	
	=		=	

Prov. for Tax

To Bank (Bal. fig)	(14000)	By Bal Bld	15000	
		By P+L	(16500)	
To Bal cld	17500	U (Prov. for Tax current year)	31500	
	31500		31500	
	=		=	

Q.3 Prepare fund flow statement

Liabilities	2018	2019	Assets	2018	2019
Bank old	116000	55000	P.A	62000	70000
Creditors	99800	119200	Addition	8000	17000
prop. Dividend	16000	24000		70000	87000
Debentures	-	10000	W Dep	25000	36000
P+L	35200	48500	Net Assets	45000	51000
W.R	26000	38000	Invest	10000	15000
S. Capital	75000	100000	Stock	181500	190000
			Deb.	131500	138700
	368000	394700		368000	394700
	=	=		=	=



Statement of changes in working Capital

Particulars	2018	2019	↑ in WC	↓ WC
A) Current Assets				
Stock	181500	190000	8500	
Debentures	131500	138700	7200	
Total CA	313000	328700		
B) Current Liabilities				
Bank a/c	116000	55000	61000	
Creditors	99800	119200		19400
Prop. Dividend	16000	24000		8000
Total CL	231800	198200		
Working Capital	81200	103500	76700	27400
↑ in WC	49300			49300
	130500	103500	76700	76700

Adjusted P & L A/c			
Particulars	Am't	Particulars	Am't
		By Bal B/d	35200
To Tr. to G/P	12000	By funds from operation	25300
To Bal c/d	48500		60500
	60500		

Fund flow Statement			
Sources of fund	Am't	Application of fund	Am't
Issue of S. Capital	25000	Pur. of P.A	6000
Issue of Deb.	10000	Pur. of Invest.	5000
Fund from operation	25300	↑ in WC	49300
	60300		60300



What is Working Capital?

Working capital is defined as the excess of current assets over current liabilities. It forms a part of the aggregate capital of the business. Now, a business needs working capital to fund its short term obligations. Typically, firms with an optimum level of working capital indicate efficiency in managing its operations. This further enables the firm to pay for its short-term dues and day-to-day operational expenses.

Therefore, working capital is a measure of business' liquidity position, operational efficiency, and short-term financial soundness.

Hence, working capital can be put into the following equation:

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

So, let's have a look at what forms current assets and current liabilities of a business in order to understand the above equation.

Current Assets

Current Assets are the assets of the business that can be easily converted into cash within a year or normal operating cycle of the business, whichever is greater. These assets typically include:

- Cash and cash equivalents
- Inventory
- Accounts Receivable
- Marketable Securities
- Prepaid Expenses
- Other Liquid Assets

Current Liabilities

Current Liabilities are the obligations of the business that are due within one operating cycle or a year, whichever is greater. Such liabilities are paid off by either using the current assets of the business or by creating other current liabilities.

Therefore, Current Liabilities include:

- Accounts Payable
- Notes Payable
- Current Portion of Long Term Debt
- Accrued Liabilities
- Unearned Revenues

Types of Working Capital

Depending upon the Periodicity & concept working capital can be classified as below:

- **Permanent Working Capital**
- **Regular Working Capital**
- **Reserve Margin Working Capital**
- **Variable Working Capital**
- **Seasonal Variable Working Capital**



- **Special Variable Working Capital**
- **Gross Working Capital**
- **Net Working Capital**

1) Permanent Working Capital

It is that portion of the working capital that remains permanently tied up in current assets to undertake business activity uninterruptedly. In other words, permanent working capital is the least amount of current assets needed to carry out business effortlessly. Thus, it is also known as fixed working capital.

The amount of fixed working capital required by a business depends upon the size and the growth of the business. For instance, minimum cash or stock required by a firm to undertake the operational activities of the business. Now, permanent working capital can be further subdivided into two categories:

2) Regular Working Capital

This is defined as the least amount of capital required by a business to fund its day-to-day operations of a business. Examples include payment of salaries and wages and overhead expenses for the processing of raw materials.

3) Reserve Margin Working Capital

Apart from day-to-day activities, a business may need some amount of capital for unforeseen circumstances. Reserve Margin Working Capital is nothing but the amount of capital kept aside apart from the regular working capital. These pool of funds are kept separately for unforeseen circumstances such as strikes, natural calamities, etc

4) Variable Working Capital

This can be defined as the working capital invested for a temporary period of time in the business. For this reason, it is also called as fluctuating working capital. Such a capital varies with respect to the change in the size of the business or changes in the assets of the business.

5) Seasonal Variable Working Capital

This refers to the increased amount of working capital a business needs during the peak season of the year. A business may even have to borrow funds to meet its working capital needs. Such a working capital specifically meets the demands of business having a seasonal nature.

6) Special Variable Working Capital

Supplementary working capital may also be required by a business to undertake exceptional operations or unforeseen circumstances. The capital required for such circumstances is termed as special variable working capital. Funds needed to finance marketing campaigns, unforeseen events like accidental fires, floods, etc.

7) Gross Working Capital

This refers to the aggregate amount of funds invested in the current assets of the business. In other words, Gross Working Capital is the total of the current assets of the business. These include:

- Cash
- Accounts Receivable
- Inventory
- Marketable Securities and
- Short-Term Investments



8) Net Working Capital

Net Working Capital is the amount by which current assets exceed the current liabilities of a business.

Thus, the working capital equation is defined as the difference between current assets and current liabilities. Where current assets refer to the sum of cash, accounts receivable, raw material and finished goods inventory. Whereas, current liabilities include accounts payable.

The amount of working capital in a business is the indicator of liquidity, operational efficiency and short-term financial soundness of the business. Businesses having adequate working capital typically have the ability to invest and grow.

On the other hand, businesses having insufficient working capital have higher odds of going bankrupt. This is because of their inability to pay for their short-term obligations, thus making it difficult for them to grow.

Factors Affecting the Working Capital:

The firm must estimate its working capital very accurately because excessive working capital results in unnecessary accumulation of inventory and wastage of capital whereas shortage of working capital affects the smooth flow of operating cycle and business fails to meet its commitment. So finance manager must estimate right amount of working capital. The finance manager must keep in mind following factors before estimating the amount of working capital.

1. Length of Operating Cycle:

The amount of working capital directly depends upon the length of operating cycle. Operating cycle refers to the time period involved in production. It starts right from acquisition of raw material and ends till payment is received after sale. The working capital is very important for the smooth flow of operating cycle. If operating cycle is long then more working capital is required whereas for companies having short operating cycle, the working capital requirement is less.

2. Nature of Business:

The type of business, firm is involved in, is the next consideration while deciding the working capital. In case of trading concern or retail shop the requirement of working capital is less because length of operating cycle is small.

The wholesalers as compared to retail shop require more working capital as they have to maintain large stock and generally sell goods on credit which increases the length of operating cycle. The manufacturing company requires huge amount of working capital because they have to convert raw material into finished goods, sell on credit, maintain the inventory of raw material as well as finished goods.

3. Scale of Operation:

The firms operating at large scale need to maintain more inventory, debtors, etc. So they generally require large working capital whereas firms operating at small scale require less working capital.



4. Business Cycle Fluctuation:

During boom period the market is flourishing so more demand, more production, more stock, and more debtors which mean more amount of working capital is required. Whereas during depression period low demand less inventories to be maintained, less debtors, so less working capital will be required.

5. Seasonal Factors:

The working capital requirement is constant for the companies which are selling goods throughout the season whereas the companies which are selling seasonal goods require huge amount during season as more demand, more stock has to be maintained and fast supply is needed whereas during off season or slack season demand is very low so less working capital is needed.

6. Technology and Production Cycle:

If a company is using labour intensive technique of production then more working capital is required because company needs to maintain enough cash flow for making payments to labour whereas if company is using machine-intensive technique of production then less working capital is required because investment in machinery is fixed capital requirement and there will be less operative expenses. In case of production cycle, if production cycle is long then more working capital will be required because it will take long time for converting raw material into finished goods whereas when production cycle is small lesser funds are tied up in inventory and raw materials so less working capital is required.

7. Credit Allowed:

Credit policy refers to average period for collection of sale proceeds. It depends on number of factors such as creditworthiness, of clients, industry norms etc. If company is following liberal credit policy then it will require more working capital whereas if company is following strict or short term credit policy, then it can manage with less working capital also.

8. Credit Avail:

Another factor related to credit policy is how much and for how long period company is getting credit from its suppliers. If suppliers of raw materials are giving long term credit then company can manage with less amount of working capital whereas if suppliers are giving only short period credit then company will require more working capital to make payments to creditors.

9. Operating Efficiency:

The firm having high degree of operating efficiency requires less amount of working capital as compared to firm having low degree of efficiency which requires more working capital. Firms with high degree of efficiency have low wastage and can manage with low level of inventory also and during operating cycle also these firms bear less expense so they can manage with less working capital also.



10. Availability of Raw Materials:

If raw materials are easily available and there is ready supply of raw materials and inputs then firms can manage with less amount of working capital also as they need not maintain any stock of raw materials or they can manage with very less stock. Whereas if the supply of raw materials is not smooth then firms need to maintain large inventory to carry on operating cycle smoothly. So they require more working capital.

11. Level of Competition:

If the market is competitive then company will have to adopt liberal credit policy and to supply goods on time. Higher inventories have to be maintained so more working capital is required. A business with less competition or with monopoly position will require less working capital as it can dictate terms according to its own requirements.

12. Inflation:

If there is increase or rise in price then the price of raw materials and cost of labour will rise, it will result in an increase in working capital requirement. But if company is able to increase the price of its own goods as well, then there will be less problem of working capital. The effect of rise in price on working capital will be different for different businessmen.

13. Growth Prospects:

Firms planning to expand their activities will require more amount of working capital as for expansion they need to increase scale of production which means more raw materials, more inputs etc. so more working capital also.

What is Significance of Working Capital?

Working capital is the life blood and nerve center of a company. Just as movement of blood is necessary in the human body for marinating existence, working capital is very necessary to uphold the horizontal running of a company. No business can run productively without a sufficient amount of working capital. The main compensation of maintaining ample amount of working capital is as under:

1. **Solvency of the company:** Sufficient working capital helps in maintaining solvency of the company by providing continuous flow of manufacture.
2. **For Goodwill of business:** Sufficient working capital enables a business concern to make punctual payments and hence helps in creating and maintaining goodwill.
3. **Easy availability of loans:** A business having sufficient working capital, high solvency and good credit standing can assemble loans from banks and other on easy and positive terms.
4. **To avail cash discounts:** Enough working capital also enables a concern to avail cash discounts on the purchases and hence it reduces costs.
5. **Normal supply of raw materials:** Enough working capital ensures usual supply of raw materials and regular production.
6. **Usual payment for day-to-day commitments:** A company which has plenty working capital can make usual payment of salaries, wages and other day-to-day



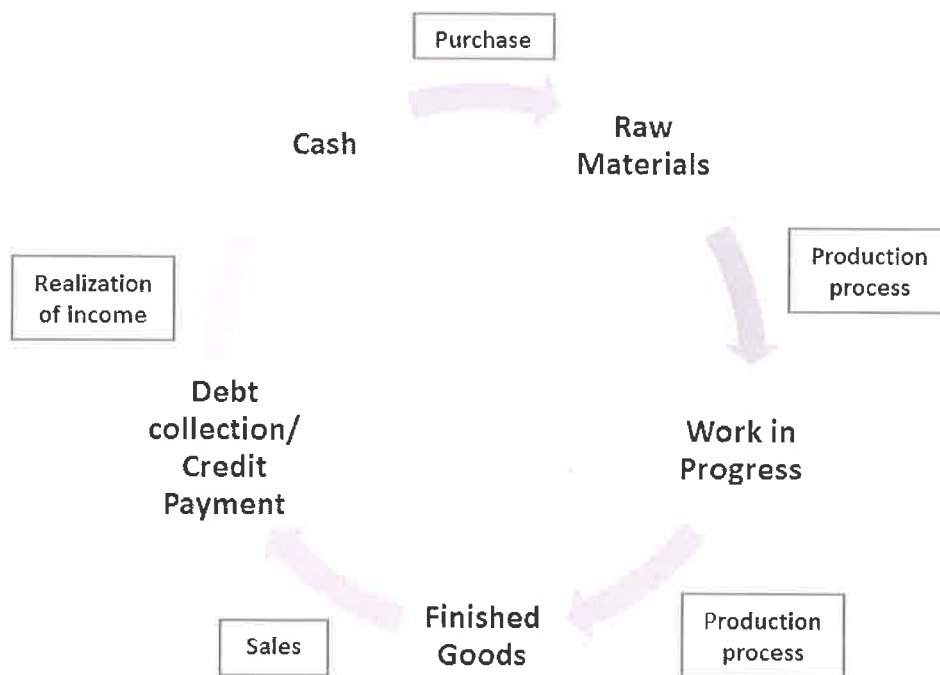
commitments which raises the confidence of its employees, increases their competence, reduces wastages and costs and enhances manufacture and profits.

7. **Utilization of favorable market situation:** Only concern with sufficient working capital can exploit positive market conditions such as purchasing its necessities in bulk when the prices are lesser and by holding its inventories for upper prices.

8. **Capability to face crisis:** Sufficient working capital enables a concern to face company crisis in emergency periods such as gloominess because during such periods, usually, there is much pressure on working capital.

Operating Cycle

The operating cycle is the average period of time required for a business to make an initial outlay of cash to produce goods, sell the goods, and receive cash from customers in exchange for the goods



Operating Cycle of a Business

A company's operating cycle usually consists of three primary actions; purchasing resources, producing the product, and selling the product. These actions create funds flows that are both unsynchronized since cash disbursements typically take place before cash proceeds. Example: Payments for store purchases takes place before the collection of receivables. They are unsure because prospect sales and costs, which produce the particular receipts and disbursements, cannot be forecasted with total exactness. If the firm is to uphold a cash balance to pay the bills as they come outstanding. In addition, the corporation must invest in inventories to fill customer orders punctually. And, finally, the company invests in accounts receivable to extend credit to its consumers. Operating cycle = Inventory alteration period +



Receivables alteration period The inventory conversion period is the extent of time required to manufacture and sell the product.

It is defined as under: Standard inventory Inventory change period = $\text{Cost of sales} / 365$. The payables delay period is the length of time the firm is able to reschedule payment on its various resource purchases.

Equation is used to calculate the payables delay period:

Accounts due + Salaries, benefits, and Payroll taxes due Payables delay period = $(\text{Cost of sales} + \text{Selling, general and executive expense}) / 365$ Finally, the cash exchange cycle represents the net time gap between the collections of cash proceeds from product sales and the cash payments for the company's different resource purchases.

It is calculated as follows: Cash conversion cycle = Operating cycle – Payable delay period

- **Cash Cost Approach:**

Depreciation is a non-cash expense & there are no funds locked up in depreciation as such, therefore it is ignored. Depreciation is neither included in valuation of work-in-progress nor in finished goods. Working capital **ignoring depreciation** is known as Cash Cost Approach of estimating working capital.

- **Total Cost Approach:**

Some companies may like to **add depreciation as a current liability** for working capital estimation. The working capital calculated by considering depreciation is known as Total Cost Approach of estimating working capital.

Sources of Working Capital Finance

1. Loans from Commercial Banks:
2. Public Deposits:
3. Trade Credit:
4. Factoring:
5. Discounting Bills of Exchange:
6. Bank Overdraft and Cash Credit
7. Advances from Customers
8. Accrual Accounts



Format of Working capital

1. TRADING CONCERN

STATEMENT OF WORKING CAPITAL REQUIREMENTS

	Amount (Rs.)
<i>Current Assets</i>	
(i) Cash	----
(ii) Receivables (For.....Month's Sales)----	----
(iii) Stocks (For.....Month's Sales)-----	----
(iv) Advance Payments if any	----
<i>Less : Current Liabilities</i>	
(i) Creditors (For..... Month's Purchases)-	----
(ii) Lag in payment of expenses	-----
WORKING CAPITAL (CA – CL)	XXX
<i>Add : Provision / Margin for Contingencies</i>	-----
NET WORKING CAPITAL REQUIRED	XXX



1. MANUFACTURING CONCERN

STATEMENT OF WORKING CAPITAL REQUIREMENTS

	Amount (Rs.)
Current Assets	
(i) Stock of R M(formonth's consumption) <i>RM.</i>	****
(ii) Work-in-progress (for ...months)	
(a) Raw Materials	****
(b) Direct Labour	****
(c) Overheads	****
(iii) Stock of Finished Goods (for ...month's sales) - <i>Total cost</i>	
(a) Raw Materials	****
(b) Direct Labour	****
(c) Overheads	****
(iv) Sundry Debtors (for ...month's sales) <i>At sales / At cost</i>	
(a) Raw Materials	****
(b) Direct Labour	****
(c) Overheads	****
(v) Payments in Advance (if any)	****
(iv) Balance of Cash for daily expenses	****
(vii) Any other item	****
Less : Current Liabilities	
(i) Creditors (For..... Month's Purchases) - <i>RM.</i>	****
(ii) Lag in payment of expenses	****
(iii) Any other	****
WORKING CAPITAL (CA - CL)xxxx	
<i>Add : Provision / Margin for Contingencies</i>	****
NET WORKING CAPITAL REQUIRED	XXX



Practical Questions

1.Prepare an estimate of networking capital requirement of Zero company from the data given below:

	<i>Estimated Cost per Unit of Production</i>	<i>Amount per Unit (Rs.)</i>
	<i>Raw Materials</i>	<i>100</i>
	<i>Direct Labour</i>	<i>40</i>
	<i>Overheads</i>	<i>80</i>
		<i>220</i>

<i>Selling price per unit</i>	<i>Rs. 240</i>
<i>Level of activity</i>	<i>1,04,000 units per annum</i>
<i>Raw Materials in stock</i>	<i>average 4 weeks</i>
<i>Work in progress [Assume 100% stage of completion of materials and 50 per cent for labour and overheads]</i>	<i>average 2 weeks</i>
<i>Finished Goods in Stock</i>	<i>average 4 weeks</i>
<i>Credit allowed by Suppliers</i>	<i>average 4 weeks</i>
<i>Credit allowed to Debtors</i>	<i>average 8 weeks</i>
<i>Payment of Wages</i>	<i>average 1 1/2 weeks.</i>



Cash at Bank is expected to be Rs. 25,000. Assume that production is sustained during 52 weeks of the year.

Solution:

Statement of working capital requirement

A.	Current Assets		Amount (Rs.)	Amount (Rs.)
	Raw Materials	$(2000 \times 4 \times 100)$		8,00,000
	Work in Progress			
	Raw Material	$(2000 \times 2 \times 100)$	4,00,000	
	Wages	$(2000 \times 2 \times 40) 50\%$	80,000	
	Overheads	$(2000 \times 2 \times 80) 50\%$	1,60,000	6,40,000
	Finished Stock	$(2000 \times 4 \times 220)$		17,60,000
	Debtors	$(2000 \times 8 \times \text{Selling price})$		35,20,000
	Cash			25,000
	Total Current Assets (CA)			67,45,000
B.	Current Liabilities			
	Creditors	$(2000 \times 4 \times 100)$		8,00,000
	Outstanding Wages	$(2000 \times 40 \times 1.5)$		

3840,000

7065,000



		Total Liabilities (CL)	Current		9,20,000
		Net Working Capital (CA-CL)			58,25,000 <i>61,45,000</i>

Working Notes:

(i) Annual production is 1,04,000 units and year is consisting of 52 weeks. So, the weekly production is 2000 units.

(ii) Debtors have been taken at *Selling Price* cost of production.

2. The cost sheet of PQR Ltd. provides the following data :

	Cost per unit (Rs.)	
Raw material	50	<i>50</i>
Direct Labour	20	<i>20</i>
Overheads (including depreciation of Rs. 10)	40	<i>30</i>
Total cost	<u>110</u>	<u><i>100</i></u>
Profits	<u>20</u>	
Selling price	<u>130</u>	

Average raw material in stock is for one month. Average material in work-in-progress is for half month. Credit allowed by suppliers: one month; credit allowed to debtors : one month. Average time lag in payment of wages: 10 days; average time lag in payment of overheads 30 days. 25% of the sales are on cash basis. Cash balance expected to be Rs. 1,00,000. Finished goods lie in the warehouse for one month.

You are required to prepare a statement of the working capital needed to finance a level of the activity of 54,000 units of output. Production is carried on evenly throughout the year and overheads accrue similarly. State your assumptions, if any, clearly.



Solution : As the annual level of activity is given at 54,000 units, it means that the monthly turnover would be $54,000/12 = 4,500$ units. The working capital requirement for this monthly turnover can now be estimated as follows :

I.	Current Assets :	Amount	Amount
	Minimum Cash Balance	Rs. 1,00,000	
	Inventories :		
	Raw Materials ($4,500 \times \text{Rs. } 50$)	2,25,000	
	Work-in-progress :		
	Materials ($4,500 \times \text{Rs. } 50/2$)	1,12,500	
	Wages 50% of ($4,500 \times \text{Rs. } 20/2$)	22,500	
	Overheads 50% of ($4,500 \times \text{Rs. } 30/2$)	33,750	
	Finished Goods ($4,500 \times \text{Rs. } 100$)	4,50,000	
	Debtors ($4,500 \times \text{Rs. } 100 \times 75\%$)	3,37,500	
	Gross Working Capital	12,81,250	Rs. 12,81,250
II.	Current Liabilities :		
	Creditors for Materials ($4,500 \times \text{Rs. } 50$)	2,25,000	
	Creditors for Wages ($4,500 \times \text{Rs. } 20/3$)	30,000	



	Creditors for Overheads (4,500 × Rs. 30)	1,35,000	
	Total Current Liabilities	3,90,000	3,90,000
	Net Working Capital		8,91,250

Working Notes :

1. The Overheads of Rs. 40 per unit include a depreciation of Rs. 10 per unit, which is a non-cash item. This depreciation cost has been ignored for valuation of work-in-progress, finished goods and debtors. The overhead cost, therefore, has been taken only at Rs. 30 per unit.
2. In the valuation of work-in-progress, the raw materials have been taken at full requirements for 15 days; but the wages and overheads have been taken only at 50% on the assumption that on an average all units in work-in-progress are 50% complete.
3. Since, the wages are paid with a time lag of 10 days, the working capital provided by wages has been taken by dividing the monthly wages by 3 (assuming a month to consist of 30 days).

**3. The following information has been extracted from the records of a Company :
Product cost sheet**

	Raw Materials	Rs. 45
	Direct Labour	20
	Overheads	40
	Total	105
	Profit	15
	Selling price	120

– Raw materials are in stock on an average for two months.

The materials are in process on an average for one month. The degree of completion is in respect of all elements of cost.



- Finished goods stock on an average is for one month.
- Time lag in payment of wages and overheads is $1\frac{1}{2}$ weeks.
- Time lag in receipt of proceeds from debtors is 2 months.
- Credit allowed by suppliers is one month.
- 20% of the output is sold against cash.
- The company expects to keep a Cash balance of Rs. 1,00,000.

The Company is poised for a manufacture of 1,44,000 units in the next year.

You are required to prepare a statement showing the Working Capital requirements of the Company

Solution :

Statement showing the Working Capital requirement of the Company

Current Assets :	Amount(Rs.)	
Stock of Raw Materials ($12,000 \times 2 \times \text{Rs. } 45$)	10,80,000	
Work-in-progress ($12,000 \times 1 \times \text{Rs. } 105$) $\times 50\%$	6,30,000	
Finished Goods ($12,000 \times 1 \times \text{Rs. } 105$)	12,60,000	
Debtors ($12,000 \times 2 \times \text{Rs. } 105 \times 80\%$) <i>At Cost</i>	20,16,000	
Cash balances	<u>1,00,000</u>	50,86,000
Current Liabilities :		
Creditors of Raw Materials ($12,000 \times 1 \times \text{Rs. } 45$)	5,40,000	
Creditors for Wages & Overheads ($12,000 \times 60 \div 4$) 1.5	<u>2,70,000</u>	<u>8,10,000</u>
Net Working capital (C.A – C.L)		<u>42,76,000</u>



Working Notes :

1. Finished goods and Debtors have been taken at cost.
2. Production per month has been taken at 12,000 units. For payment of wages and overheads, month is taken as consisting of 4 weeks.

4. Hi-tech Ltd. plans to sell 30,000 units next year. The expected cost of goods sold is as follows

	<i>Rs. (Per Unit)</i>
<i>Raw Material</i>	<i>100</i>
<i>Manufacturing expenses</i>	<i>30</i>
<i>Selling, administration and financial expenses</i>	<i>20</i>
<i>Selling price</i>	<i>200</i>

The duration at various stages of the operating cycle is expected to be as follows :

Raw Material stage

2 months

Work-in-progress stage

1 month

Finished stage

1/2 month

Debtors stage

1 month

Assuming the monthly sales level of 2,500 units, estimate the gross working capital requirement if the desired cash balance is 5% of the gross working capital requirement, and work-in-progress is 25% complete with respect to manufacturing expenses.

[B.Com. (H.),

D.U., 2013 Adapted]



Solution :

Statement of Working Capital Requirement

Current Assets :	Amt.(Rs.)	Amt.(Rs.)
Stock of Raw Material ($2,500 \times 2 \times 100$)		5,00,000
Work-in-progress :		
Raw Materials ($2,500 \times 100$)	2,50,000	
Manufacturing Expense 25% of ($2,500 \times 30$)	18,750	2,68,750
Finished Goods :		
Raw Material ($2,500 \times 1/2 \times 100$)	1,25,000	
Manufacturing Expenses ($2,500 \times 1/2 \times 30$)	37,500	1,62,500
Debtors ($2,500 \times 150$) <i>At Cost</i>		3,75,000
		13,06,250
Cash Balance ($13,06,250 \times 5/95$)		68,750
Working Capital Requirement		13,75,000

Note: Selling, administration and financial expenses have not been included in valuation of closing stock. However, Debtors have been valued at full cost. Alternatively, Debtors can also be valued at Rs. 30.



5. Calculate the amount of working capital requirement for SRCC Ltd. from the following information:

	<i>Rs. (Per Unit)</i>
<i>Raw Material</i>	<i>160</i>
<i>Direct Labour</i>	<i>60</i>
<i>Overheads</i>	<i>120</i>
<i>Total cost</i>	<i>340</i>
<i>Profit</i>	<i>60</i>
<i>Selling price</i>	<i>400</i>

Raw materials are held in stock on an average for one month. Materials are in process on an average for half-a-month. Finished goods are in stock on an average for one month.

Credit allowed by suppliers is one month and credit allowed to debtors is two months. Time lag in payment of wages is 1½ weeks. Time lag in payment of overhead expenses is one month. One fourth of the sales are made on cash basis.

Cash in hand and at the bank is expected to be Rs. 50,000 : and expected level of production amounts to 1,04,000 units for a year of 52 weeks.

You may assume that production is carried on evenly throughout the year and a time period of four weeks is equivalent to a month.

Solution :-

1.	Current Assets :	Amount	Amount
	Cash Balance		Rs. 50,000
	Stock of Raw Material (2,000 × 160 × 4)		12,80,000



	Work-in-progress :		
	Raw Materials ($2,000 \times 160 \times 2$)	Rs. 6,40,000	
	Labour and Overheads ($2,000 \times 180 \times 2$) $\times 50\%$	<u>3,60,000</u>	10,00,000
	Finished Goods ($2,000 \times 340 \times 4$)		<u>27,20,000</u>
	Debtors ($2,000 \times 75\% \times 340 \times 8$) <i>At cost</i>		<u>40,80,000</u>
	Total Current Assets		<u>91,30,000</u>
2.	Current Liabilities :		
	Creditors ($2,000 \times \text{Rs. } 160 \times 4$)		12,80,000
	Creditors for Wages ($2,000 \times \text{Rs. } 60 \times 1\frac{1}{2}$)		1,80,000
	Creditors for Overheads ($2,000 \times \text{Rs. } 120 \times 4$)		<u>9,60,000</u>
	Total Current Liabilities		<u>24,20,000</u>
	Net Working Capital (CA – CL)		67,10,000



6.The data of ABC Ltd. is as under:

<i>Production of the year</i>	<i>₹</i>	<i>69,000 units</i>
<i>Finished Goods inventory</i>	<i>₹</i>	<i>3 months</i>
<i>Raw Materials inventory</i>	<i>₹</i>	<i>2 months consumption</i>
<i>Production process</i>	<i>₹</i>	<i>1 month</i>
<i>Credit allowed by Creditors</i>	<i>₹</i>	<i>2 months</i>
<i>Credit given to Debtors</i>	<i>₹</i>	<i>3 months</i>
<i>Selling Price per unit</i>	<i>₹</i>	<i>Rs. 50 each</i>
<i>Raw Material</i>	<i>₹</i>	<i>50% of selling price</i>
<i>Direct Wages</i>	<i>₹</i>	<i>10% of selling price</i>
<i>Overheads</i>	<i>₹</i>	<i>20% of selling price</i>

There is a regular production on sales cycle, wages and overheads accrue evenly. Wages are paid in the next month of accrual. Material is introduced in the beginning of production cycle. Work-in-process involves use of full unit of raw materials in the beginning of manufacturing process and other conversion costs equivalent to 50%.

You are required to find out working capital requirement of ABC Ltd.

Solution :

Monthly Production $(69000 \div 12) = 5750$



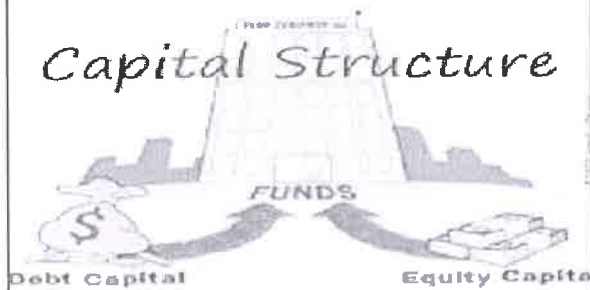
Statement of Working Capital Requirement

I. Current Assets:				
		RM ($5,750 \times 2 \times 25$)	Rs. 2,87,500	
WIP	—	RM ($5,750 \times 1 \times 25$)	1,43,750	
	—	W ($5,750 \times 1 \times 5$) 50%	14,375	
	—	O/H ($5,750 \times 1 \times 10$) 50%	28,750	
		FG ($5,750 \times 3 \times 40$)	6,90,000	
		Debtors ($5,750 \times 3 \times 40$) <i>At cost</i>	6,90,000	Rs. 18,54,375
II. Current Liabilities:				
		Creditors ($5,750 \times 2 \times 25$)	2,87,500	
		Wages ($5,750 \times 1 \times 5$)	28,750	3,16,250
Working Capital Requirement (CA – CL)				15,38,125



Capital Structure

Capital Structure



Capital Structure

Capital structure can be defined as the mix of owned capital and borrowed capital

Maximization of shareholders' wealth is prime objective of a financial manager.

Capitalization and Capital Structure

- Capitalization refers to the total amount of long-term funds employed by the firm.
- Capital structure signifies the kinds of securities and their proportion in the total capitalization of a firm.

Optimal Capital Structure

- The optimal or the best Capital Structure implies the most economical and safe ratio between various types of securities
- It is that mix of debt and equity which maximizes the value of the company and minimizes the cost of capital.



Financial structure and capital structure.

- Financial structure is different from capital structure. It means the composition of the entire liabilities side of the balance sheet.
- It shows the way in which the firm's assets are financed. Financial structure includes long-term as well as short-term sources of finance.
- Capital structure signifies the proportion of long-term sources of finance in the capitalization of the firm.
- It is represented by shareholders' funds and long-term loans. Capital structure is a part of the financial structure.

Importance/Features of Capital Structure

- Maximum Returns
- Less Risky
- Safety
- Flexibility
- Economy
- Capacity
- Control

Factors affecting Capital Structure Internal Factors

- 1) Size of Business
- 2) Nature of Business
- 3) Regularity and Certainty of Income
- 4) Assets Structure
- 5) Age of the Firm
- 6) Desire to Retain Control
- 7) Future Plans
- 8) Operating Ratio
- 9) Trading on Equity
- 10) Period and Purpose of Financing

Factors Affecting Capital Structure External Factors

- 1) Capital Market Condition
- 2) Nature of Investors
- 3) Statutory Requirements
- 4) Taxation Policy
- 5) Policies of Financial Institutions
- 6) Cost of Financing
- 7) Seasonal Variations
- 8) Economic Fluctuations
- 9) Nature of Competition



Forms of pattern of Capital Structure: (Sources of Finance)

The capital structure of a new company generally includes the following:

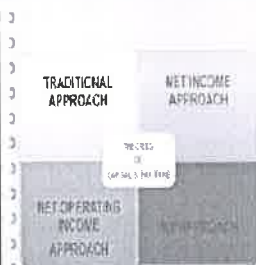
- a) Equity shares
- b) Preference shares
- c) Debentures or Bonds
- d) Long-term loans

Theories of Capital Structure

The four major theories or approaches which explain the relationship between capital structure, cost of capital and valuation of firm are:

1. Net Income (NI) Approach
2. Net Operating Income (NOI) Approach
3. The Traditional Approach
4. Modigliani-Miller (MM) Approach

Capital Structure Theories



ASSUMPTIONS –

- ❖ Firms use only two sources of funds – equity & debt.
- ❖ No change in investment decisions of the firm, i.e. no change in total assets.
- ❖ 100 % dividend payout ratio, i.e. no retained earnings.
- ❖ Business risk of firm is not affected by the financing mix.
- ❖ No corporate or personal taxation.
- ❖ Investors expect future profitability of the firm.

Capital Structure Theories – A) Net Income Approach (NI)

- This approach has been propounded by Durand David in 1959
- Net Income approach proposes that there is a definite relationship between capital structure and value of the firm.
- According to this theory a firm can increase the value of the firm and reduce the overall cost of capital by increasing the proportion of debt in its capital structure to the maximum possible extent.
- NI approach assumptions –
 - NI approach assumes that a continuous increase in debt does not affect the risk perception of investors.
 - Cost of debt (K_d) is less than cost of equity (K_e) [i.e. $K_d < K_e$]
 - Corporate income taxes do not exist.



Capital Structure Theories – A) Net Income Approach (NI)

The total market value of the firm (V) under the Net Income Approach is ascertained by the following formula:

$$V = S + D$$

- V = Total market value of the firm
- S = Market value of equity shares (NI/K_e)
- D = Market value of debt (I/K_d)
- NI = Net Income K_e = Cost of Equity
- I = Interest K_d = Cost of Debt
- The overall cost of capital (K_o) Or Weighted average cost of capital is calculated as under

$$K_o = EBIT/V$$

EBIT = Earning Before Interest and Tax

Format of Calculating value of firm on the basis of NI Approach

Particulars	Amount
Net Operating Income (EBIT)	Xxx
Less: Interest on debenture (I)	Xxx
Earning Available to Equity Shareholders (NI)	Xxx
Equity Capitalization Rate (K_e)	Xxx (%)
Market Value of Equity (S)	Xxx
Market Value of Debt (D)	Xxx
Total Value of the Firm (S+D)	Xxx
Overall Cost of Capital (K_o) = $EBIT/V$ (%)	Xxx (%)

Example of Net Income Approach

A company expects EBIT of Rs 100000. It has Rs 250000, 8% Debentures. The equity capitalization rate of the company is 10%.

1) Calculate the value of the firm and overall cost of Capital according to the Net Income Approach.

2) If the debenture debts are increased to Rs 400000. What shall be the value of the firm and overall cost of capital?

1) Ans :-

Particulars	Amount
Net Operating Income (EBIT)	100000
Less: Interest on debenture (I) ($250000 \times 8\%$)	20000
Earning Available to Equity Shareholders (NI)	80000
Equity Capitalization Rate (K_e) (Cost of Equity)	10%
Market Value of Equity (S) ($80000/10\%$)	800000
Market Value of Debt (D)	250000
Total Value of the Firm (V) = (S+D)	1050000
Overall Cost of Capital (K_o) = $EBIT/V$ (%) ($100000/1050000$) $\times 100$	9.52%

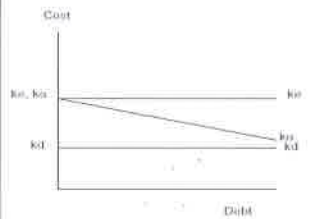
2) Ans :- If the debenture debts are increased to Rs 400000. What shall be the value of the firm and overall cost of capital?

Particulars	Amount
Net Operating Income (EBIT)	100000
Less: Interest on debenture (I) ($400000 \times 8\%$)	32000
Earning Available to Equity Shareholders (NI)	68000
Equity Capitalization Rate (K_e)	10%
Market Value of Equity (S) ($68000/10\%$)	680000
Market Value of Debt (D)	400000
Total Value of the Firm (V) = (S+D)	1080000
Overall Cost of Capital (K_o) = $EBIT/V$ (%) ($100000/1080000$) $\times 100$	9.26%

Conclusion :- With the increase in debt financing (from Rs 250000 to Rs 400000), the value of the firm increased (from Rs 1050000 to Rs 1080000) and the overall cost of capital has decreased (from 9.52% to 9.26%).



Capital Structure Theories – A) Net Income Approach (NI)



As the proportion of debt (K_d) in capital structure increases, the WACC (K_w) reduces.

Capital Structure Theories – B) Net Operating Income (NOI)

- Net Operating Income (NOI) approach is the exact opposite of the Net Income (NI) approach.
- As per NOI approach, **value of a firm is not dependent upon** its capital structure. Thus, There is no Optimal Capital Structure.
- The capital structure decision is irrelevant and the degree of financial leverage does not affect the WACC and market value of the firm.
- Assumptions –
 - *WACC is always constant, and it depends on the business risk.*
 - *Value of the firm is calculated using the overall cost of capital i.e. the WACC only.*
 - *The cost of debt (K_d) is constant.*
 - *Corporate income taxes do not exist.*

Capital Structure Theories – B) Net Operating Income (NOI)

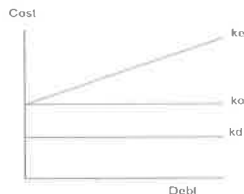
- NOI propositions (i.e. school of thought) –
 - The use of higher debt component (borrowing) in the capital structure increases the risk of shareholders.
 - Increase in shareholders' risk causes the equity capitalization rate to increase, i.e. higher cost of equity (K_e)
 - A higher cost of equity (K_e) nullifies the advantages gained due to cheaper cost of debt (K_d)
 - In other words, the finance mix is irrelevant and does not affect the value of the firm.

NEUTRALIZATION

- The increase in the proportion of debt in the capital structure would lead to increase in the financial risk of equity share holders.
- The advantage associated with the use of the relatively less expensive debt in terms of explicit cost is exactly neutralized by the implicit cost of debt represented by the increase in the cost of equity capital.



Capital Structure Theories – B) Net Operating Income (NOI)



- Cost of capital (K_o) is constant.
- As the proportion of debt increases, (K_e) increases.
- No effect on total cost of capital ($WACC$)

Format of Calculating value of firm on the basis of NOI Approach

Particulars	Amount
Net Operating Income (EBIT/NOI)	xxx
Overall Capitalization Rate (Overall Cost of Capital) (K_o)	Xxx
Total Value of the firm (EBIT/ K_o)	Xxx
Less Market Value of Debt (D)	(Xxx)
Market Value of Equity (S)	Xxx
Earning Available to Equity Shareholders (NOI – Interest)	Xxx
Equity Capitalization rate (NOI-Interest / S) X 100	Xxx (%)

Example of Net Operating Income Approach

A company expects EBIT of Rs 200000. It has Rs 800000, 7% Debentures. The Overall capitalization rate of the company is 10%.

1) Calculate the value of the firm and Equity Capitalization Rate (Cost of Equity) according to the Net Operating Income Approach.

2) If the debenture debts are increased to Rs 1200000. What shall be the value of the firm and Equity Capitalization Rate (Cost of Equity)?

1) Ans

Particulars	Amount
Net Operating Income (EBIT/NOI)	200000
Overall Capitalization Rate (Overall Cost of Capital) (K_o)	10%
Total Value of the firm (EBIT/ K_o) (200000/10%)	2000000
Less Market Value of Debt (D)	(800000)
Market Value of Equity (S)	1200000
Earning Available to Equity Shareholders (200000-80000)	140000
Equity Capitalization rate (140000/1200000) x 100	12%

2) Ans If the debenture debts are increased to Rs 1200000. What shall be the value of the firm and Equity Capitalization Rate (Cost of Equity)?

Particulars	Amount
Net Operating Income (EBIT/NOI)	200000
Overall Capitalization Rate (Overall Cost of Capital) (K_o)	10%
Total Value of the firm (EBIT/ K_o) (200000/10%)	2000000
Less Market Value of Debt (D)	(1200000)
Market Value of Equity (S)	800000
Earning Available to Equity Shareholders (200000-80000)	116000
Equity Capitalization rate (116000/800000) x 100	14.5%

Conclusion :- With the increase in debt financing (from Rs 800000 to Rs 1200000), the value of the firm remains unchanged but Equity capitalization rate will increase (from 12% to 14.5%).



Capital Structure Theories – C) Modigliani – Miller Model (MM)

- MM approach supports the NOI approach, i.e. the capital structure (debt-equity mix) has no effect on value of a firm.
- MODIGLIANI- MILLER explain the relationship between capital structure, cost of capital and value of the firm under two Propositions:

1. When there is no corporate taxes
2. When there is corporate taxes

Capital Structure Theories – C) Modigliani – Miller Model (MM)

1) WHEN THERE IS NO CORPORATE TAXES

- The MODIGLIANI- MILLER Approach is identical to NOI approach when there are no corporate taxes.
- MODIGLIANI- MILLER argue that in the absence of taxes, the cost of capital and value of the firms are not affected by capital structure or debt-equity mix.
- Change in Debt/Equity Ratio affect K_c But K_o remaining constant. But beyond certain limit of debt the K_d increase and K_c decrease again keeping K_o constant

Capital Structure Theories – C) Modigliani – Miller Model (MM)

- As per MM approach, 2 identical firms (levered firm and Unlevered firm) which are exactly similar in all respect (except leverage) cannot have different values for long period of time.
- If market value of identical firms are different, "Arbitrage Process" will take place.
- Arbitrage process includes buying and selling of those securities which are out of equilibrium in the capital market. i.e. Buying of undervalued securities and selling of overvalued securities.
- This will continue till the equilibrium is restored. Thus Arbitrage ensures that the securities of two identical firms cannot sell at different price for long.
- Thus Capital structure decision of a firm does not affect its Market Value

Modigliani – Miller Model (MM) Assumption

The MM hypothesis is based on the following assumption

- There is perfect market. It implies that
 - (a). Investors are free to buy and sell securities;
 - (b). they can borrow freely on the same term as the firms do;
 - (c). Investors act in a rational manner.



Modigliani – Miller Model (MM) Assumption

- There are no corporate taxes.
- There are no transaction costs.
- The payout is 100 per cent. That is, all the earnings are distributed to shareholders.
- Firms can be grouped into homogeneous risk classes.

Capital Structure Theories – C) Modigliani – Miller Model (MM)

2. When there are corporate taxes:

Modigliani and Miller have recognized that capital structure would affect the cost of capital and value of the firm, when there are corporate taxes.

If a firm uses debt in its capital structure, the cost of capital will decline and market value will increase. This is because of the deductibility of interest charges for computation of tax.

Since interest is tax deductible, the effective cost of borrowing will be less than the rate of interest.

Modigliani – Miller Model.....

- According to MM Approach, the value of levered firm (Which uses debt) would be exceed that of the unlevered (Which does not use debt) by an amount equal to the Levered firm Debts multiplied by the Tax rate.
- **Value of levered firm** = Value of unlevered firm + (Tax rate x Debt)
- $V_L = V_U + (D \times T)$
- According to the M-M approach, the value of an unlevered firm (Which does not use debt) can be calculated as follows.
- **Value of unlevered firm**, $V_U = \text{EBIT}(1-t) / K_e$ (as only equity in CS)
- Where EBIT = Earnings Before Interest and Taxes
T = Tax rate K_e = Cost of equity

Example of MM Approach

- Company A and B are homogeneous in all respects except that Company A is levered while Company B is unlevered. Company A has Rs. 5,00,000 assumptions are met and the tax rate is 50% (3). EBIT is Rs. 50,000 and that equity-capitalisation rate for Company B is 12%. What would be the value for each firm according to M—M's approach?

Solution:

- Value of unlevered Firm (V_U) = $[\text{EBIT} (1-t)] / K_e$
= $[50,000 \times (1-0.5)] / 12\%$
= Rs. 2,08,333
- Value of levered Firm (V_L) = Rs. 2,08,333 + (Rs. 5,00,000 X 50%)
= Rs. 4,58,333



Criticism of MM Approach

1. Imperfections do exist in Capital Market
2. The assumption of rate of interest fails in practice
3. Personal leverage is no substitute for corporate leverage
4. the assumption of the absence of transaction cost is also not correct.
5. The assumption of non- existence of corporate tax is also not correct.

Capital Structure Theories – D) Traditional Approach

- The NI approach and NOI approach hold extreme views on the relationship between capital structure, cost of capital and the value of a firm.
- Traditional approach (*'intermediate approach'*) is a compromise between these two extreme approaches.
- According to Traditional Approach, weighted average cost of capital decreases only upto certain level of financial leverage and starts increasing beyond certain level of judicious mix of debt and equity.

Capital Structure Theories – D) Traditional Approach

- Hence, Traditional approach confirms the existence of an optimal capital structure; where WACC is minimum and value of the firm is maximum.
- As per this approach, a best possible mix of debt and equity will maximize the value of the firm.

Capital Structure Theories – D) Traditional Approach

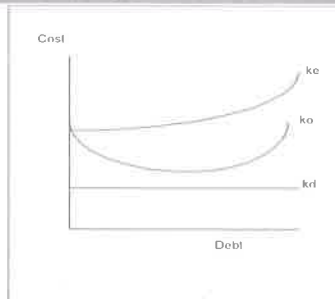
The approach works in 3 stages –

- 1) Value of the firm increases with an increase in borrowings (since $K_d < K_e$). As a result, the WACC reduces gradually. This phenomenon is up to a certain point.
- 2) At the end of this phenomenon, reduction in WACC ceases and it tends to stabilize. Further increase in borrowings will not affect WACC and the value of firm will also stagnate.
- 3) Increase in debt beyond this point increases shareholders' risk (*financial risk*) and hence K_e increases. K_d also rises due to higher debt, WACC increases & value of firm decreases.



Capital Structure Theories – D) Traditional Approach

- Cost of capital (K_o) is reduced initially.
- At a point, it settles
- But after this point, (K_o) increases, due to increase in the cost of equity. (K_e)



Example of Traditional Approach Theory

- Compute the value of the firm, value of shares and average cost of capital from the following information:
- Net Operating Income Rs. 2,00,000
- Total investment Rs. 10,00,000
- Equity Capitalization Rat, If:
 - 1) Firm uses no debt 10%
 - 2) Firm uses Rs. 4,00,000 as debt 11%
 - 3) Firm uses Rs. 6,00,000 as debt 15%
- Assume that Rs. 4,00,000 debt can be raised at 5% and Rs. 6,00,000 can be raised at 7% rate of interest.

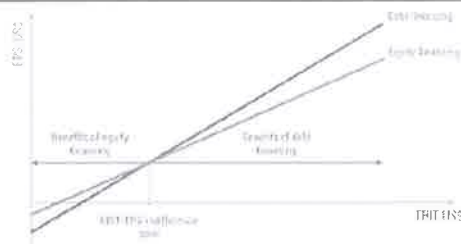
Particulars	No Debt	Rs. 4,00,000 (5%)	Rs. 6,00,000 (7%)
Net Operating Income (EBIT)	2,00,000	2,00,000	2,00,000
Less: Interest on debenture (I)	---	20,000	42,000
Earning Available to Equity Shareholders	2,00,000	1,80,000	1,58,000
Equity Capitalization Rate (K_e)	10%	11%	15%
Market Value of Equity (S)	20,00,000	16,36,363	10,53,333
Market Value of Debt (D)	---	4,00,000	6,00,000
Total Value of the Firm (V) = (S+D)	20,00,000	20,36,363	16,53,333
Overall Cost of Capital (K_o) = EBIT/V (%)	10%	9.82%	12.09%

Conclusion - From the solution above, we can conclude that the increasing the debt portion, over a certain limit, has increased the cost of capital eventually.

EBIT(PBIT)- EPS Analysis

- EBIT – Earning Before Interest and Tax
- EPS – Earning per Share
- EBIT-EPS analysis is a technique used to determine the optimal capital structure in which the value of EPS has the highest amount for a given amount of EBIT.
- EBIT-EPS analysis gives a scientific basis for comparison among various financial plans and shows ways to maximize EPS.
- Hence EBIT-EPS analysis may be defined as 'a tool of financial planning that evaluates various alternatives of financing a project under varying levels of EBIT and suggests the best alternative having highest EPS and determines the most profitable level of EBIT'.





Explanations- When EBIT reaches the EBIT-EPS indifference point, both financing plans generate equal EPS. However, if EBIT has a lower value, equity financing will generate higher EPS than debt financing. For any value of EBIT to the right of the indifference point, debt financing will give a higher value of EPS because of a higher degree of financial leverage.

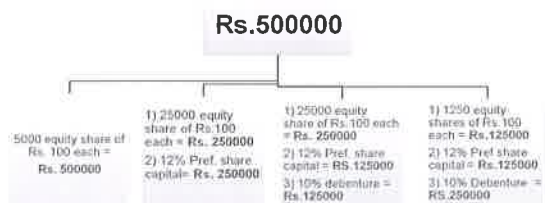
Example of EBIT- EPS Analysis

Suppose, ABC Ltd. which is expecting the EBIT of Rs.1,50,000 per annum on an investment Rs.5,00,000, is considering the finalization of the capital structure or the financial plan. Suppose, it analyzes the following four options to raise the required funds of Rs.5,00,000.

- 1) By issuing equity share capital of RS. 100 each
- 2) 50% funds by equity share capital and 50% funds by 12% preference shares.
- 3) 50% funds by equity share capital, 25% by 12% preference shares and 25% by issue of 10% debentures.
- 4) 25% funds by equity share capital, 25% as 12% preference share and 50% by the issue of 10% debentures.

Assuming that ABC Ltd. belongs to 50% tax bracket, the EPS under the above four options can be calculated as follows:

Ans :- Working note



Particulars	Option 1	Option 2	Option 3	Option 4
EBIT	150000	150000	150000	150000
Less- Interest	-----	-----	12500	25000
EBT	150000	150000	137500	125000
Less-Tax (50%)	75000	75000	68750	62500
PAT	75000	75000	68750	62500
Less - Pref. Dividend	-----	30000	15000	15000
Amount available to Equity shareholders	75000	45000	53750	47500
No. of Equity shares	5000	2500	2500	1250
EPS = Amount available to equity shareholders / no. of equity shares	$\frac{75000}{5000} = 15$	$\frac{45000}{2500} = 18$	$\frac{53750}{2500} = 21.5$	$\frac{47500}{1250} = 38$



Indifference Point - Example

Debarathi Co. Ltd., is planning an expansion programme. It requires Rs 20 lakhs of external financing for which it is considering two alternatives. The first alternative calls for issuing 15,000 equity shares of Rs 100 each and 5,000 10% Preference Shares of Rs 100 each; the second alternative requires 10,000 equity shares of Rs 100 each, 2,000 10% Preference Shares of Rs 100 each and Rs 8,00,000 Debentures carrying 9% interest. The company is in the tax bracket of 50%. You are required to calculate the indifference point for the plans and verify your answer by calculating the EPS.

Comparison of EPS under Different Plans

	Plan I	Plan II
EBIT	1,20,000	1,20,000
Less: Interest	72,000	72,000
EBT	48,000	48,000
Less: Tax	24,000	24,000
EAT	24,000	24,000
Less: Preference Dividend	20,000	20,000
Earnings available to equity shareholders	4,000	4,000
No. of equity shares	15,000	10,000
EPS	Rs 1.20	Rs 1.20

Solution: Capital Structure

	Plan I (Rs)	Plan II (Rs)
Equity share capital	15,00,000	10,00,000
10% Preference share capital	5,00,000	2,00,000
9% Debentures		8,00,000
Total	20,00,000	20,00,000
Number of equity shares	15,000	10,000

Let an X level of EBIT the EPS under both the plans will be same

$$\text{EPS under 1st alternative: } \frac{X(1 - T) - P_1}{N_1} = \frac{X(1 - 0.5) - 20,000}{15,000}$$

$$\text{Again, EPS under 2nd alternative: } \frac{(X - J)X(1 - T) - P_2}{N_2} = \frac{(X - 72,000)(1 - 0.5) - 20,000}{10,000}$$

Now, equalizing both the EPS we get

$$\frac{X(1 - 0.5) - 20,000}{15,000} = \frac{(X - 72,000)(1 - 0.5) - 20,000}{10,000}$$

$$\frac{0.5X - 20,000}{15,000} = \frac{0.5X - 56,000 - 20,000}{10,000}$$

$$\frac{0.5X - 20,000}{15,000} = \frac{0.5X - 76,000}{10,000}$$

$$\frac{0.5X - 20,000}{15,000} = \frac{0.5X - 76,000}{10,000}$$

$$\frac{0.5X - 20,000}{15,000} = \frac{0.5X - 76,000}{10,000}$$

$$\frac{0.5X - 20,000}{15,000} = \frac{0.5X - 76,000}{10,000}$$

We may verify the result by calculating EPS under both the plans.

Trading on Equity

- The concept of trading on equity refers to the use of debt component in the capital employed. A company is required to create a capital structure in such a way which help in increase wealth of equity shareholders.
- If use of debt in the capital structure increase the earning before equity shareholders, such situation is called trading on equity. They stand to gain of their earning per share increase with the inclusion of debt component in the capital employed.

Why and Where trading on equity is used ?

- Trading on equity is used to increase the earning per share and to maximise the wealth of equity shareholders. This is possible when a company needs more funds and raises debt funds for its financial requirements. For this Return on Investment (ROI) should be more than the Rate of Interest on Debt.
- Trading on equity can be used when the company is financially strong and is capable of paying fixed commitments in the form of interest and preference dividend and repayment of long term funds raised in time.



Example of Trading on Equity

- Total capital employed = ₹ 30,00,000
- Interest on debt = 10%
- Tax Rate = 30%
- Earnings before interest and tax (EBIT) = ₹ 4,50,000
- Return on investment =

$$= (\text{Net profit before interest and tax} / \text{capital employed}) \times 100$$

$$= (\text{₹ } 4,50,000 / \text{₹ } 30,00,000) \times 100$$
Return on investment = 15%

Components	Situation I	Situation II
Equity share capital @ ₹ each	₹ 20,00,000	₹ 10,00,000
10% Debentures	₹ 10,00,000	₹ 20,00,000
Total Capital Employed	₹ 30,00,000	₹ 30,00,000
Earnings before Interest and Tax	₹ 4,50,000	₹ 4,50,000
Less: Interest @ 10%	₹ 1,00,000	₹ 2,00,000
Earning after interest	₹ 3,50,000	₹ 2,50,000
Less: Tax @ 30%	₹ 1,05,000	₹ 75,000
Earning after tax	₹ 2,45,000	₹ 1,75,000
Earning Per Share	$\frac{\text{₹ } 2,45,000}{20,000} = \text{₹ } 12.25$	$\frac{\text{₹ } 1,75,000}{10,000} = \text{₹ } 17.5$

conclusion

- In the above situation , though capital employed as well as rate of tax are same but with the inclusion of debt in the second situation, earning per share has increased from ₹ 12. 25 per share to 17.5 per share.
- Hence, there is trading on equity and the wealth of equity shareholders has been increased.
- It is due to the reason that ROI is 15% which is more than Rate of Debt of 10%.



Capital Structure planning

1) Progressive Company Ltd. has the following capital structure

Equity Capital (Rs. 10 each)	Rs. 10,00,000
15% Debentures	Rs. 8,00,000
Total	Rs. 18,00,000

The company is planning to raise another Rs. 15,00,000 for modernisation and expansion.

The following alternatives are considered :-

- To raise the entire amount by equity share capital (Rs. 10 each)
- To raise the amount by term loan at an interest rate of 16%
- To raise 50% amount by equity capital and the balance by 16% term loan.
- To raise Rs. 8,00,000 by equity share capital, Rs. 4,00,000 by 16% term loan and the balance by 14% preference share capital.

Assuming an income-tax of 50% and an EBIT of Rs. 8,00,000, advise the company about the proper alternative on the basis of EPS.

2) XYZ Ltd has currently an ordinary share capital of Rs. 250 lakhs consisting of equity shares of Rs. 100 each. The company is planning to raise another Rs. 200 lakhs for financing a major expansion programme. The following four options are available

- Entirely through ordinary shares
- Rs. 100 lakhs through ordinary shares and the balance by 15% term loan.
- Rs. 50 lakh through ordinary shares, Rs. 150 lakhs through long term borrowing at 15% rate of interest.
- Rs. 100 lakhs through ordinary shares, and Rs. 100 lakhs through preference shares with 14% dividend.

Expected EBIT of the company is Rs. 80 lakh. Calculate EPS under each alternative and advise the company about the most beneficial alternative. Income tax rate can be taken as 50%.



Cost of Capital (Problems)

- A) Cost of Preference Share Capital (K_p)
 B) Cost of

Cost of Preference Share Capital (K_p)

Preference Shareholders are entitled to have a fixed rate of dividends.

1) Cost of Irredeemable preference share Capital

$$K_p = \frac{D}{NP}$$

where, D = Annual Preference Dividend
 NP = Net proceeds

Formula,

Face Value	xx
+ Premium	xx
- Discount	(xx)
- Cost of issue	(xx)
NP	xxx

e.g. A Company issues 10,000, 10% preference shares of Rs. 100 each, cost of issue is 2%. Calculate cost of preference capital, if these shares are issued at
 a) at par b) at a premium of 10%
 c) at a discount of 5%.

Ans:-

a) Cost of (K_p) if issued at Par

$$K_p = \frac{D}{NP} = \frac{10}{100 - (100 \times 2\%)} = \frac{10}{98} \times 100 = 10.20\%$$



2) Cost of p.s. Capital issued at Premium

$D = \text{Rs } 10$ (10% on 100)

N.P =

face Value	100
(+) Premium	10
(-) Cost of issue	2
	<u>108</u>

$$K_p = \frac{D}{NP} = \frac{10}{108} \times 100 = \boxed{9.26\%}$$

3) Cost of p.s. Capital issued at Discount

$D = \text{Rs } 10$ (10% on Rs 100 f.v)

N.P =

face Value	100
(-) Discount	(5)
(-) Cost of issue	(2)
	<u>93</u>

$$K_p = \frac{D}{NP} = \frac{10}{93} \times 100 = \boxed{10.75\%}$$

★ Cost of Redeemable Preference shares

~~$$K_p = \frac{D + \frac{(F - NP)}{n}}{1}$$~~

$$K_p = \frac{PD + \frac{(F - P)}{n}}{\frac{F + P}{2}}$$

PD = Pref. Dividend, F = Repayable Value,
P = Net proceeds, n = maturity period.



e.g. XYZ Ltd issues Rs 100 face value preference shares carrying 14% dividend which are repayable at par after 10 years. The net amount realised at per share Rs 92.

$$K_p = \frac{PD + \frac{(F - P)}{n}}{\frac{F + P}{2}}$$

$$PD = 100 \times 14\% = \text{Rs } 14$$

$$F = \text{Repayable Value (at Par)} = \text{Rs } 100$$

$$P = NP = \text{Net amount realised} = \text{Rs } 92$$

$$n = \text{maturity period} = 10 \text{ years}$$

$$K_p = \frac{14 + \frac{(100 - 92)}{10}}{\frac{100 + 92}{2}} \times 100$$

$$= \frac{14 + 0.8}{96} = \frac{14.8}{96} \times 100 = 15.42\%$$



Cost of Equity share Capital (K_e)

Three approaches

- 1) Dividend / Price Approach.
Dividend Yield Method.

$$K_e = \frac{D}{P} \times 100 \quad / \quad \frac{D}{NP} \times 100$$

K_e = Cost of Equity

D = Expected Dividend per share

NP = Net proceeds per share.

P = Market price per share.

- e.g. A company has distributed dividend of Rs 25 on each share of Rs 10. The current market price of equity share is Rs 60. Calculate the K_e as per Dividend Yield method.

$$K_e = \frac{25}{60} \times 100 = 41.67\%$$

- 2) Dividend / Price + Growth rate approach,
(Dividend Yield plus Growth in Dividend Method)

$$K_e = \left(\frac{D}{P} \times 100 \right) + G \quad \left[\frac{D}{NP} \times 100 + G \right]$$

G = Growth Rate.

- e.g. The current market price of an equity share of a company is Rs 90. The current Dividend per share is Rs 4.50. The expected Growth rate of dividend is 7%. Calculate the Cost of equity Capital.

e)

$$K_e = \left(\frac{4.50}{90} \times 100 \right) + 7\%$$

$$= 5\% + 7\%$$

$$= \boxed{12\%}$$

3) Earning / Price Approach
[Earning Yield Method]

$$K_e = \frac{EPS}{MPS} \times 100$$

e.g. A Company shares are currently trading at a price of Rs 70 with 500000 outstanding shares. Their expected profit after tax for the coming year is Rs 8400000, calculate K_e .

Ans:-

$$K_e = \frac{EPS}{MPS} \times 100$$

$$EPS = \frac{\text{Amount Available to E.S. Holders}}{\text{No. of Equity Shares}}$$

each,

$$= \frac{8400000}{500000} = 16.8$$

6)

$$K_e = \frac{16.8}{70} \times 100 = \boxed{24\%}$$

1

4.50
lend
y



Cost of Debentures (Debt) (K_d)

A) Cost of Irredeemable Debentures

a) Before Tax

b) After Tax

B) Cost of Redeemable Debentures

a) Before Tax

b) After Tax

2)

A) Cost of Irredeemable Debentures before tax

$$K_d = \frac{I}{NP} \times 100$$

e.g. Company issued 10000, 10% Debentures of Rs 100 each on 1st April. The cost of issue was Rs 25000. Determine the cost of debentures if they were issued

i) at a premium of 10%.

ii) at a discount of 10%.

iii) At par

i) Debenture issued at a premium of 10%.

$$K_d = \frac{I}{NP} \times 100 \quad (I = \frac{1000000 \times 10\%}{100000})$$

N.P	f. Value. (10000 x 100)	10,00,000
(+) Premium		1,00,000
(-) Cost of issue		25,000
	N.P	10,75,000

$$K_d = \frac{1,00,000}{10,75,000} \times 100 = 9.30\%$$

ii) Debenture issued at Discount of 10%.

N.P = f.v	10,00,000
(-) Discount	1,00,000
(-) C. of issue	25,000
	8,75,000



$$K_d = \frac{100000}{875000} \times 100 = 11.43\%$$

2) Cost of Irredeemable Debenture after tax

$$K_d = \left(\frac{I}{N.P} \times 100 \right) \times (1 - t)$$

or

$$K_d = I (1 - t)$$

B) Cost of Redeemable Debentures Before Tax

$$K_d = \frac{I \left(\frac{F - P}{n} \right)}{\frac{F + P}{2}}$$

Cost of Irredeemable Debentures After Tax

$$K_d = \frac{I \left(\frac{F - P}{n} \right)}{\frac{F + P}{2}} (1 - t)$$

ex. A firm issues 10% Debentures of Rs 100000 after allowing 2% Commission & realized 98000. The debentures are due for maturity at the end of the 10th year. Calculate debt before tax & after tax

Ans:

$$\text{Before Tax} = \frac{I + \left(\frac{F - P}{n} \right)}{\left(\frac{F + P}{2} \right)} \quad (\text{Tax Rate } 2\%)$$



$$= \frac{10000 + \frac{100000 - 98000}{10}}{\frac{100000 + 98000}{2}}$$

$$= \frac{10000 + 200}{99000} = 10.30\%$$

After Tax

$$= \frac{10000 (1 - 50\%) + 200}{99000}$$

$$= \frac{5000 + 200}{99000}$$

After Tax = $\frac{10000 + 200}{99000} (1 - 0.50\%)$

$$= \frac{5100}{99000} \times 100$$

$$= 5.15\%$$

Cost of Retained Earnings (K_r)

$$K_r = \left(\frac{D}{NP} + G \right) \times (1 - t) \times (1 - b)$$

or

$$= K_e \times (1 - t) \times (1 - b)$$

t = Tax Rate

b = brokerage cost / cost of purchasing securities



Weighted Average Cost of Capital Composite Cost of Capital Overall Cost of Capital Average Cost of Capital

Weighted Average Cost of Capital is the aggregate cost of capital which is calculated on the basis of the weights assigned to each source of capital based on either book values or market values.

Q. The sources of capital structure are below

Sources	Rs
Equity share Capital	800000
14% Preference share Capital	500000
10% Term Loan	1000000
	2300000

The expected dividend on equity capital is 10%. The company tax rate is 50%.
You are required to calculate the weighted average cost of capital, before & after tax.

Computation of Weighted Average Cost of Capital (K_o) Before & After Tax

Sources	Book Value	Weight	Before Tax Rate (%)	Weighted Cost (%)	After Tax Cost (%)	Weighted Cost (%)
E.S.C	800000	0.35	10	3.50	10	3.5
P.S.C	500000	0.22	14	3.08	14	3.08
Term loan	1000000	0.43	10	4.30	5	2.15
	2300000	1.00		10.88%		8.73%

$$K_d = I(1 - t) = 10(1 - 0.50) = 5\%$$

$$WACC = \text{Before Tax} = 10.88\%$$

$$WACC = \text{After Tax} = 8.73\%$$



Q-2 X Ltd. presents the following Capital Structure data:

Sources	Rs
Ordinary Shares (1000 shares)	50000
10% Preference shares	20000
12% Debentures	15000
	85000

The dividend payment of the company is @ 5%. Further the company raises additional funds for replacement of assets of 14% Debentures amounting Rs 10000. (Tax-50%)
Find out WACC of existing as well as new Capital structure.

Ans: Computation of WACC of Existing Capital Structure.

Sources	Am't	Weights	After Tax Cost	Weighted Cost
Ordinary Shares	50000	0.58	5	2.9
P.S	20000	0.24	10	2.4
Debentures	15000	0.18	6	1.08
	85000	1.00		6.38

Computation of WACC of New Capital Structure.

Sources	Am't	Weights	After Tax Cost	Weighted Cost
O.S	50000	0.52	5	2.6
P.S	20000	0.21	10	2.1
12% Deb	15000	0.16	6	0.96
14% Deb	10000	0.11	7	0.77
	95000	1.00		6.43



Q. Madhuri Ltd. has its books on the following amounts & specific cost of each type of Capital

Type of Capital	Book Value	Market Value	Specific Cost (%)
Equity	600000	900000	15
Preference	100000	110000	8
Debt	400000	380000	5
Retained Earning	200000	300000	13
	1300000	1690000	

Determine the WACC using
 1) Book Value weights
 2) Market Value weights

Ans) WACC (Book Value)

Type of Capital	Book Value	Proportion	Specific Cost	WACC Total Cost
ESC	600000	0.46	15	6.9
P.S.C	100000	0.08	8	0.64
Debt	400000	0.31	5	1.55
R.E	200000	0.15	13	1.95
	1300000	1		11.04%

WACC (Market Value)

Type of Capital	M.V	Proportion	Specific Cost	WACC Total Cost
ESC	900000	0.53	15	7.95
P.S.C	110000	0.07	8	0.56
Debt	380000	0.22	5	1.10
R.E	300000	0.18	13	2.34
	1690000	1		11.95%



Leverage.

- ⇒ leverage refers to the use of fixed cost instruments to maximise the return potential for the shareholder.
- ⇒ leverage is an investment strategy of using borrowed money - specifically, the use of various financial instruments or borrowed capital - to increase the potential return of an investment.

Types of leverage.

1	operating leverage	financial leverage	combined leverage
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Operating leverage

- ⇒ The operating leverage measures the change in the EBIT as a result of change in sales.
- ⇒ This leverage arises because of the presence of fixed cost in the cost structure.
- ⇒ The EBIT will change by a higher % than the percentage change in sales, if fixed costs are present in the cost structure.
- ⇒ A higher operating leverage indicates that the proportion of fixed cost is higher and EBIT will increase at a higher rate than the rate of increase in sales.
- ⇒ If sales decreases, the EBIT will decrease at a higher rate.

$$OL = \frac{\text{Contribution}}{\text{EBIT}}$$



Financial leverage

(Q.1)

- ⇒ F.L. measures the percentage change in EBT as a result of changes in EBIT.
- = F.L. will be higher if the difference between EBIT & EBT is higher.
- = This difference will be higher if amount of interest is higher because the difference between EBIT & EBT is the amount of interest.

$$F.L. = \frac{EBIT}{EBT}$$

Combined leverage

- ⇒ C.L. expresses the relationship between Contribution & the taxable income. It helps in finding out the resulting percentage change in taxable income on account of percentage change in sales.

$$\text{Combined leverage} = OL \times F.L.$$

$$= \frac{\text{Contribution}}{EBIT} \times \frac{EBIT}{EBT}$$

$$= \frac{\text{Contribution}}{EBT}$$



Q.1) The Capital Structure of ABC Ltd. consists of equity share capital of Rs 10,00,000 (share of Rs 10 each) and Rs 10,00,000 of 20% Debentures.
Other particulars

Sales 200000 units

Selling Price Rs 10 per unit

Variable Cost Rs 5 per unit

Fixed Cost Rs 400000

Rate of tax 50%

Calculate, C.L., F.L. & O.L.

Ans:

Sales	2000000	(200000 units x 10 ea)
- V.C	10,00,000	(200000 x 5)
Contribution	10,00,000	
- Fixed cost	400000	
EBIT	600000	
- Int	200000	(Deb 10,00,000 x 20%)
EBT	400000	
- Tax (50%)	200000	
EAT	200000	

$$O.L. = \frac{\text{Contribution}}{\text{EBIT}} = \frac{10,00,000}{600000} = 1.67 \text{ times}$$

$$F.L. = \frac{\text{EBIT}}{\text{EBT}} = \frac{600000}{400000} = 1.50 \text{ times}$$

$$C.L. = \frac{\text{Contribution}}{\text{EBT}} = \frac{10,00,000}{400000} = 2.5 \text{ times}$$



2 Units sold 40000
 Unit sale Price Rs 9
 Fixed Cost Rs 35000
 Variable Cost P.u. Rs 7
 8% Debt Capital Rs 80000

3 Sales Rs 10,00,000
 V.C 40% of sales
 F. Cost Rs 2,00,000
 Interest Rs 15,000

Calculate OL, FL & CL.

Also state change in the above leverages if selling price is increased by 15%.

Ans:

Sales	1000000
- V.C	400000
Contribution	600000
- F. Cost	200000
EBIT	400000
- Int	15000
EBT	385000

Sales ↑ 15%

11,50,000
- 4,60,000
6,90,000
- 2,00,000
4,90,000
- 15,000
4,75,000

OL = $\frac{C}{EBIT}$

$\frac{600000}{400000} = 1.5 \text{ times}$ $\frac{690000}{490000} = 1.408 \text{ times}$

F.L = $\frac{EBIT}{EBT}$

$\frac{400000}{385000} = 1.038$ $\frac{490000}{475000} = 1.0315$

CL = $\frac{C}{EBT}$

$\frac{600000}{385000} = 1.558$ $\frac{690000}{475000} = 1.452$



Q.4 From the following particulars, prepare income statements of Suse Ltd, Slow Ltd and Fast Ltd for the year ended 31st March 2021

	Suse Ltd	Slow Ltd	Fast Ltd
Operating leverage	5	6	4
Financial leverage	4	5	3
Interest (RS)	3000	4000	2000
P/V Ratio	40%	25%	50%
Income-Tax Rate.	50%	50%	50%

Ans

Income Statement

Particulars	Suse	Slow	Fast
Sales	50000	120000	24000
- V.C	30000	90000	12000
Contribution	20000	30000	12000
- Fixed Cost	16000	25000	9000
EBIT	4000	5000	3000
- Interest	3000	4000	2000
EBT	1000	1000	1000
- Tax (50%)	500	500	500
EAT	500	500	500

W. Note

Suse Ltd

$$OL = \frac{\text{Contribution}}{\text{EBIT}}$$

EBIT

$$OL = \frac{\text{Contribution}}{\text{Contribution} - \text{Fixed Cost}}$$

Contribution - Fixed Cost

$$FL = \frac{\text{EBIT}}{\text{EBT}}$$

EBT

$$4 = \frac{\text{EBIT}}{\text{EBIT} - \text{Int}}$$

EBIT - Int

$$4 = \frac{\text{EBIT}}{\text{EBIT} - 3000}$$

EBIT - 3000



$$4(\text{EBIT} - 3000) = \text{EBIT}$$

$$4\text{EBIT} - 12000 = \text{EBIT}$$

$$4\text{EBIT} - \text{EBIT} = 12000$$

$$3\text{EBIT} = 12000$$

$$\text{EBIT} = \frac{12000}{3} = \boxed{4000}$$

$$\text{OL} = \frac{\text{Contribution}}{\text{EBIT}}$$

$$5 = \frac{C}{4000}$$

$$C = 5 \times 4000 = 20,000$$

$$\text{PIV Ratio} = \frac{C}{\text{Sales}} \times 100$$

$$40 = \frac{20000}{\text{Sales}} \times 100$$

$$\text{Sales} = \frac{20000 \times 100}{40} = \boxed{50,000}$$



Capital Budgeting Techniques

→ Traditional Techniques

→ Non-Discounting Cash flow methods

- 1) Payback Period
- 2) ARR

Discounted Cash flow Techniques

- 1) NPV
- 2) IRR
- 3) PI

Payback Period Method

A) When Annual Cash flow is equal

$$\text{Payback period} = \frac{\text{Initial outflow / Initial investment}}{\text{Annual Cash inflow}}$$

Eg. Initial investment in a proposal involves Rs 10,00,000 and annual cash inflow is projected at Rs 2,00,000 p.a. for 8 years.

$$\text{Payback period} = \frac{10,00,000}{2,00,000} = 5 \text{ years}$$

B) When Annual Cash inflow is unequal

$$\text{Payback period} = P + \frac{B}{C}$$

where P = No. of years immediately preceding the year of final recovery

B = Balance amount to be recovered in the year of final recovery

C = Cash inflow in the year of final recovery.



e.g. Initial investment Rs 50,00,000

Projected Cash Inflow

Year	C.I	Cumulative CI
1	12,00,000	12,00,000
2	19,00,000	31,00,000
3	25,00,000	56,00,000
4	27,00,000	83,00,000
5	26,00,000	1,09,00,000

$$\text{Payback Period} = 2 + \frac{50,00,000 - 31,00,000}{25,00,000}$$

$$= 2 + \frac{19,00,000}{25,00,000}$$

$$= 2 + 0.76$$

$$= 2.76 \text{ years.}$$

Accounting Rate of Return

$$\text{ARR} = \frac{\text{Average NPAT}}{\text{Average investment} / \frac{\text{Initial Investment}}{2}} \times 100$$

$$\text{Average NPAT} = \frac{\text{Total NPAT}}{\text{No. of Years}}$$

$$\text{Average investment} =$$

$$\frac{\text{Initial investment} + \text{SV} + \text{Additional W.C.}}{2}$$

$$\text{Initial investment} = \text{Initial investment} + \text{Additional WC} + \text{Installation charges} + \text{Transportation charges.}$$



e.g Calculate ARR when an investment costing Rs 40,00,000 is expected to produce following profits

Year	NPAT
1	320000
2	640000
3	720000
4	240000
	<u>1920000</u>

Ans:-

~~ARR~~
 Average NPAT = $\frac{1920000}{4} = 480000$

Average Investment = $\frac{4000000}{2} = 20,00,000$

ARR = $\frac{480000}{20,00,000} \times 100 = 24\%$

Net Present Value (NPV)

NPV = Present Value of Cash Inflows - Present Value of Cash outflow

	EBDDT	xxx
Cash Inflow = - Dep		xx
	EBIT	xxx
	- Ind	xx
	EBT	xxx
	- Tax	xx
	NPAT	xxx
	+ Dep	xxx
Cash Inflow		xxx

Cash Inflow = NPAT + Dep.



e.g. Charulata Ltd. is planning an investment in new project. The investment budget of the company is ~~Rs 28,000~~ ^{Rs 28,000}. The company has following two investment alternatives

Particulars	Year	Project A	Project B
Initial Investment	0	28000	28000
Cash Inflows	1	4000	20000
	2	8000	16000
	3	12000	8000
	4	18000	4000
	5	24000	4000

Calculate NPV @ 10% Cost of Capital & suggest which project is profitable for the company

Project A				Project B		
Year	CFI	PV @ 10%	PVCFI	CI	PV @ 10%	PVCI
1	4000	0.909	3636	20000	0.909	18180
2	8000	0.826	6608	16000	0.826	13216
3	12000	0.751	9012	8000	0.751	6008
4	18000	0.683	12294	4000	0.683	2732
5	24000	0.621	14904	4000	0.621	2484
			46454			42620

NPV = PV of CI - PV of CO

Project A = 46454 - 28000 = Rs 18454

Project B = 42620 - 28000 = Rs 14620

Suggestion = NPV of Project A is higher than the project B. Hence, it is suggested that Project A should be more profitable for the company.



Internal Rate of Return (IRR)

IRR is a rate which equates the present value of cash inflow with present value of cash outflow associated with the project.

$$NPV = \text{Zero}$$

Accept the project if $IRR > \text{Cost of Capital}$
 Reject the project if $IRR < \text{Cost of Capital}$
 Indifference $IRR = \text{Cost of Capital}$

IRR is the expected compound annual rate of return that will be earned on a project or investment.

$$IRR = \text{lower Discount Rate} + \frac{PVCI(L) - PVCO}{PVCI(L) - PVCI(H)} \times \begin{matrix} \text{Higher} \\ \text{Dis} \\ \text{Rate} \end{matrix} - \begin{matrix} \text{lower} \\ \text{Dis} \\ \text{Rate} \end{matrix}$$

e.g. \Rightarrow A company has to consider the following project with the initial outflow of Rs 10,000

Years	Cash Inflows (Rs)
1	1000
2	1000
3	2000
4	10000

Compute the internal rate of return and comment on the project if the opportunity cost is 14%.

Ans: \Rightarrow Calculate the present value factor for the project

$$\text{Present Value factor} = \frac{\text{Initial Investment}}{\text{Average Annual Cash Inflow}}$$

$$\frac{10000}{4} = 3500 \qquad \frac{10000}{3500} = 2.857$$



In the present Value Annuity table,
Value near to 2.857 for 4 years is
(2.855).

IRR is between 10% & 15%.

Year	Cash Inflow	PV @ 10%	PVCF	PV @ 15%	PVCF
1	1000	0.909	909	0.870	870
2	1000	0.826	826	0.756	756
3	2000	0.751	1502	0.658	1316
4	10000	0.683	6830	0.572	5720
		10067		8662	

$$NPV = PV \text{ of CI} - PV \text{ of CO}$$

$$NPV \text{ at } 10\% = 10067 - 10000 = \text{Rs } 67$$

$$NPV \text{ at } 15\% = 8662 - 10000 = \text{Rs } -1338$$

$$IRR = \text{low Dis Rate} + \frac{PVCF_L - PVCO}{PVCF_L - PVCF_H} \times (H.D.R - L.D.R)$$

$$= 10\% + \frac{10067 - 10000}{10067 - 8662} \times (15 - 10)$$

$$= 10\% + \frac{67}{1405} \times 5$$

$$= 10\% + 0.24\%$$

$$= 10.24\%$$

Profitability Index

Recommendation \Rightarrow As the opportunity
Cost of the firm is 14%, the project
having IRR of 10.23% should be
rejected $IRR < \text{opp. cost.}$



Profitability Index (PI)

It is also termed as Benefit - Cost Ratio. PI is expressed in terms of the ratio of discounted benefits over the discounted costs.

$$PI = \frac{\text{Present Value of Cash Inflows}}{\text{Present Value of Cash Outflows}}$$

Rule., $PI > 1$:- The proposal is accepted
 $PI < 1$:- The proposal is rejected
 $PI = 0$:- Indifference.

e.g. A Company is appraising two projects A & B. Assuming the present value of future cash flows for project A is Rs 5000 & that for project B is Rs 4850. Also assume that both projects have an initial capital investment of Rs 4750 each. Calculate the PI for both projects & determine whether or not to invest in the project.

$$PI \text{ of project A} = \frac{PV \text{ of CI}}{PV \text{ of CO}} = \frac{5000}{4750} = 1.05$$

$$PI \text{ of Project B} = \frac{PV \text{ of CI}}{PV \text{ of CO}} = \frac{4850}{4750} = 1.02$$

Recommendation :- Both projects have a $PI > 1$. So we can accept both project if they are independent. However, if we can only accept one project, we will most likely accept the project with the largest PI (ie. Project A).



c. Balkrishna Industries Ltd. has the following investment proposal which requires investment of Rs 53,00,000 & has following income as Cash inflows.

Year	Cash Inflows
1	16,00,000
2	18,00,000
3	20,00,000
4	15,00,000
5	15,00,000
6	10,00,000

Assume cost of Capital as 10%. Calculate pay-back period, net present value & Profitability Index.

Year	Cash Inflows	Cumulative CI	PV @ 10%	Present Value of CI
1	16,00,000	16,00,000	0.909	14,54,400
2	18,00,000	34,00,000	0.826	14,86,800
3	20,00,000	54,00,000	0.751	15,02,000
4	15,00,000	69,00,000	0.683	10,24,500
5	15,00,000	84,00,000	0.621	9,31,500
6	10,00,000	94,00,000	0.564	5,64,000
				<u>69,63,200</u>

$$1) \text{ Payback period} = \frac{\text{No. of Years}}{\text{Required Amt}} + \frac{\text{Annual CI}}$$

$$= 2 + \frac{19,00,000}{20,00,000}$$

$$= 2 + 0.95$$

$$= 2.95 \text{ Years}$$

$$2) \text{ NPV} = \text{PV of CI} - \text{PV of CO}$$

$$= 69,63,200 - 53,00,000 = \underline{16,63,200}$$

$$3) \text{ PI} = \frac{\text{PV of CI}}{\text{PV of CO}} = \frac{69,63,200}{53,00,000} = \underline{1.313}$$



Q.2 Z Ltd is examining two mutually exclusive proposals for new Capital investment. The data on the proposals are as follows

Particulars	Proposal A	Proposal B
1) Initial Cashoutflow	27,00,000	30,00,000
2) Salvage Value	Nil	Nil
3) Expected life	6 years	6 years
4) Depreciation	SLM	SLM
5) EBDIT		
1	650000	975000
2	725000	1000000
3	875000	1100000
4	950000	1025000
5	900000	950000
6	800000	850000

The Corporate income tax rate is 30%. Calculate
 (1) PBP (2) NPV (3) IRR (4) ARR
 Rank the proposals under each of technique.

Ans) Calculation of Payback Period

Project A							CFAT + Dep
Year	EBDIT	Dep	EBT	Tax	EAT	CT	
1	650000	450000	200000	60000	140000	590000	
2	725000	450000	275000	82500	192500	642500	
3	875000	450000	425000	127500	297500	747500	
4	950000	450000	500000	150000	350000	800000	
5	900000	450000	450000	135000	315000	765000	
6	800000	450000	350000	105000	245000	695000	
					15,40,000	42,40,000	

Year	CT	Cumulative	PV @ 15%	PV of CT
1	590000	590000	0.869	5,13,710
2	642500	12,32,500	0.756	4,85,730
3	747500	19,80,000	0.657	4,91,108
4	800000	27,80,000	0.571	4,56,800
5	765000	35,45,000	0.497	3,80,205
6	695000	42,40,000	0.432	3,00,240
				26,26,793

$$1) \text{ Payback Period} = 3 + \frac{720000}{800000} = 3.9 \text{ years}$$

$$2) \text{ NPV} = \text{PV of CI} - \text{PV of CO} \\ = 2626493 - 2700600 \\ = (73207)$$

$$3) \text{ ARR} = \frac{\text{Average NPAT}}{\text{Average Investment}} \\ = \frac{256667}{1350000} \times 100 = 19.01\%$$

Project B

$$\text{Payback Period} = 3 + \frac{397500}{867500} = 3.45 \text{ years}$$

$$\text{NPV} = 3192727 - 3000000 = 192727$$

$$\text{ARR} = \frac{338333}{1500000} \times 100 = 22.55\%$$

Summary

Particulars	Proposal A	Proposal B
1) Pay-back Period	3.9 years	3.45 years
2) NPV	- 73,207	192,731
3) ARR	19.01%	22.55%

From the above mentioned summary, Proposal B is better than A in all respects, its pay-back period is lesser than A, while ARR is more than A. In case of NPV, Proposal A is showing negative net present value while proposal B is showing positive net present value.



Time Value of Money

- ⇒ The money received today is worth more than the same amount of money receivable at a future date.
- ⇒ The value of a rupee to be received in future is less than the value of a rupee on hand today.
- ⇒ The difference between the value of money 'at present' and its value 'at a future date' is referred to as the "Time Value of Money".

- 1) Future Value (Compounding Techniques)
- 2) Present Value (Discounting Techniques)

Future Value (Compounding Concept)

- A) Future Value of a single cashflow
- B) Future Value of uneven cashflow
- C) Future Value of Annuity / Series of Equal cashflow
- D) Future Value of Multiple flows.

A) Future Value of a single cashflow.

$$FV = PV(1+r)^n$$

where, FV = Future Value, PV = Present Value
r = Interest Rate, n = Time period after which FV is to be ascertained

Q. ⇒ Calculate FV of Rs 5000 at 11% after 9 years.

$$\begin{aligned} FV &= PV(1+r)^n \\ &= 5000(1+0.11)^9 \\ &= 5000 \times (1.11)^9 \\ &= 5000 \times 2.56 = 12800 \end{aligned}$$

in calculator, press
1.11 → x sign →
press = sign for 8
times



Compounding Intervals.

Daily Annually Semi annually Quarterly monthly weekly wh

Note: frequent computation will give higher maturity valuation

$$CV / FV = P \times \left(1 + \frac{i}{m}\right)^{n \times m}$$

m = No. of times of compounding

Annual = m = 1

Semi Annual m = 2

Quarterly, m = 4

Monthly m = 12

Q = find out future value / Compound value if Rs 1000 invested @ 12% for 6 years on quarterly compounding term.

$$\text{Compound Value} = PV \times \left(1 + \frac{i}{m}\right)^{n \times m}$$

$$= 1000 \times \left(1 + \frac{0.12}{4}\right)^{6 \times 4}$$

$$= 1000 \times (1.03)^{24}$$

$$= 1000 \times 2.033$$

$$= \boxed{2033}$$



B) Future Value of Uneven Cashflow

$$FV = R_1(1+r)^{n-1} + R_2(1+r)^{n-2} + R_3(1+r)^{n-3} + \dots + R_n$$

where,

FV = Future Value.

R = Payment per Compounding period

r = Interest rate per Compounding period.

In the above formula, Present Value (PV) is replaced with R (Payment per Compounding period)

Q: Calculate the future value of the income stream from the following data:-

i) Mr. A is planning to save money to purchase a car & plans to deposit the following cashflow stream each year:-

Year	1	2	3	4
Rs	1500	3000	2200	3000

ii) Interest rate is 9% for 4 years compounded semi-annually.

Solution

$$FV = R_1(1+r)^{(n-1) \times m} + R_2(1+r)^{(n-2) \times m} + R_3(1+r)^{(n-3) \times m} + R_4(1+r)^{(n-4) \times m}$$

where $R_1 = 1500$, $R_2 = 3000$, $R_3 = 2200$, $R_4 = 3000$

r = compounded semi annually = $\frac{r}{m} = \frac{0.09}{2}$

$$= 0.045$$

$$= 1500(1+0.045)^{(4-1) \times 2} + 3000(1+0.045)^{(4-2) \times 2} + 2200(1+0.045)^{(4-3) \times 2} + 3000(1+0.045)^{(4-4) \times 2}$$

$$= 1500 \times (1.045)^6 + 3000(1.045)^4 + 2200(1.045)^2 + 3000(1.045)^0$$

$$= 1500 \times 1.3023 + 3000 \times 1.1925 + 2200 \times 1.0920 + 3000 \times 1$$

$$= 1954 + 3578 + 2402 + 3000$$

$$= \boxed{10934}$$



c) Future Value of Annuity Series of Equal Cashflows

→ Annuity can be defined as any regular & equal cashflows at fixed intervals for a specified period of time.

e.g. if Rs 1000 is deposited at the end of every year starting from the current year for a period of three years, it will be termed as an Annuity Deposit of Rs 1000 for 3 years

Note: Investment is done at the end of every year.

$$FVA = A \times \left[\frac{(1+r)^n - 1}{r} \right]$$

Where,

FVA = Future Value of Annuity

A = Constant periodic flow

r = Rate of Interest

n = Time period

Q. Calculate the future value of annuity at the end of five years from the following data.

i) Deposition of Rs 10000 in five equal annual payments in the FD

ii) Interest rate is 10% p.a.

→

$$FVA = A \times \left[\frac{(1+r)^n - 1}{r} \right]$$

$$= 10,000 \times \left[\frac{(1+0.10)^5 - 1}{0.10} \right]$$

$$= \boxed{61100}$$



Growing Annuity (if $i > r$ or $i < r$)

$$FVA = A \times \frac{(1+i)^n - (1+g)^n}{i-g}$$

where $i = g$

$$FVA = A \times n(1+i)^{n-1}$$

D) Future Value of Multiple Flows (same as uneven cash flows)

Calculate the compound value at the end of the 5th year from the following data:

- i) Alok made an investment of Rs 500, Rs 1000, Rs 1500, Rs 2000 & Rs 2500 at the end of each year
- ii) The cashflows to accumulate at the end of year 5
- iii) The interest rate 5% & compounded annually

$$FV = R_1(1+r)^{n-1} + R_2(1+r)^{n-2} + R_3(1+r)^{n-3} + R_4(1+r)^{n-4} + R_5(1+r)^{n-5}$$

$$= 500(1+0.05)^{5-1} + 1000(1+0.05)^{5-2} + 1500(1+0.05)^{5-3} + 2000(1+0.05)^{5-4} + 2500(1+0.05)^{5-5}$$

$$= 500 \times (1.05)^4 + 1000 \times (1.05)^3 + 1500 \times (1.05)^2 + 2000 \times (1.05)^1 + 2500 \times (1.05)^0$$

$$= 500 \times 1.216 + 1000 \times 1.158 + 1500 \times 1.103 + 2000 \times 1.05 + 2500 \times 1$$

$$= 608 + 1158 + 1654.5 + 2100 + 2500$$

$$= \boxed{8020.50}$$



Present Value / Discounting Techniques

Discounting is the process of determining the present value of a payment or stream of payments, which is likely to be received in the future. Q.

$$PV = \frac{FV}{(1+r)^n}$$

- A) Present Value of a single cash flow
- B) Present Value of uneven cash flow stream
- C) Present Value of Annuity / series of equal future cash flows
- D) Present Value of Perpetuity

A) Present Value of a single cash flow

$$PV = \frac{FV}{(1+r)^n}$$

Q. Calculate the Present Value from the following data.

- A) A person will receive Rs 3000 after 8 years
- B) The discount rate is 10%.

Ans:

$$PV = FV \left(\frac{1}{1+r} \right)^n$$
$$= 3000 \times \left(\frac{1}{1.10} \right)^8$$

$$\begin{array}{r} 3000 \\ (1+r)^n \\ = 3000 \\ 2.1436 \\ = 1399.53 \end{array}$$

$$= 3000 \times 0.4665$$

$$= 1399.53 \text{ or } (1400) \text{ App.}$$



B) Present Value of Uneven Cashflow Streams

$$PV = \frac{R_1}{(1+r)^1} + \frac{R_2}{(1+r)^2} + \frac{R_3}{(1+r)^3} + \dots + \frac{R_n}{(1+r)^n}$$

Q. Calculate PV

Period	y.	RS
1	3	1500
2	4	3000
3	5.5	2200
4	5	3000

$$PV = \frac{1500}{(1+0.03)^1} + \frac{3000}{(1+0.04)^2} + \frac{2200}{(1+0.055)^3} + \frac{3000}{(1+0.05)^4}$$

$$= \frac{1500}{1.03} + \frac{3000}{1.0816} + \frac{2200}{1.1742} + \frac{3000}{1.2155}$$

$$= 1456.31 + 2773.67 + 1873.61 + 2468.12$$

$$= \underline{\underline{RS 8571.71}}$$

C) Present Value of Annuity / Series of Equal Future Cashflows

$$PVA = A \left[\frac{(1+r)^n - 1}{r(1+r)^n} \right]$$

Q. Calculate the PV from the following data.

- Amount of Annuity is RS 50000
- Discount rate is 8%.
- Annuity duration is 5 years

$$PVA = 50000 \left[\frac{(1+0.08)^5 - 1}{0.08(1+0.08)^5} \right] = 50000 \times \frac{0.4693}{0.1195}$$

$$= \underline{\underline{RS 199750}}$$



Growing Annuity

$$PV = \frac{CF_1}{r-g} \left[1 - \left(\frac{1+g}{1+r} \right)^n \right]$$

D) Present Value of Perpetuity

Perpetuity may be defined as a constant stream of identical cash flows at regular intervals with no end.

$$PV_p = \frac{\text{Annual Cash flow}}{r}$$

- e. Rs 10000 receives every year perpetually what is PV of this 10,000 if discount Rate is 10%.

$$PV_p = \frac{10000}{10\%} = \text{Rs } 100000$$

ie. if Rs 100000 is deposited in a bank at once & will receive return of Rs 10000 annually

- e.g) Mr. X retires & he wants Rs 3000 perpetually (for indefinite period) per month, he is ready to invest @ 8% annual compounding, what amount to be set aside now?

$$PV_p = \frac{3000}{\left(\frac{0.08}{12} \right)} = \frac{3000}{0.00667} = 449775$$

So, He should set aside Rs 449775 Now to get Rs 3000 monthly after retirement.



Growing perpetuity

Growing perpetuity is a type of annuity, which involves gradually increasing payments over an indefinite period of time.

$$PV_{GP} = \frac{\text{Annual Cash flow}}{r-g}$$

Q. Assuming that Discount Rate is 7% p.a, how much would you pay to receive Rs 50 growing at 5% annually, forever

$$PV_{GP} = \frac{\text{Annual Cash flow}}{r-g} = \frac{50}{0.07 - 0.05}$$

$$= \frac{50}{0.02} = \frac{5000}{2} = \underline{\underline{Rs 2500}}$$

Annuity Due

Annuity due means, "An annuity whose payment is to be made immediately, rather than at the end of the period."

In normal annuity of 'n' number of years, the first 'Cashflow' takes place on completion of one year & the last 'Cashflow' takes place at the end of the n^{th} period.

In the case of 'Annuity Due', the first 'Cashflow' takes place now & the last 'Cashflow' takes place in the beginning of the n^{th} year."

$$FV = \frac{A [(1+r)^n - 1]}{r} \times (1+r)$$



FV of Annuity Due.

- Q. Calculate the actual amount deposited by the person from the following data:
- 1) A person deposited some amount at the beginning of each year for 10 years in order to provide a sum of ₹ 50000 at the end of 10 years.
 - 2) The interest rate is 10% p.a.

$$FV = \frac{A[(1+r)^n - 1]}{r} \times (1+r)$$

$$50000 = \frac{A(1+0.10)^{10} - 1}{0.10} \times (1+0.10)$$

$$50000 \times 0.10 = A \times 1.5937 \times 0.10$$

$$\frac{50000}{1.10} = A \times 1.5937$$

$$\frac{45454.5}{1.5937} = A$$

$$A = ₹ 285$$

$$50000 = A \times 1.749$$

$$\frac{50000}{1.749} = A$$

$$A = 28587.7$$

Q. PV of Annuity Due.

$$PV = \frac{\text{Annuity Amount} \times PVAF(r, n)}{(1+r)}$$



Q. Calculate PV

- i) Starting from now if Rs 1000 is receivable in the beginning of next 4 years
- ii) the rate of interest is 6%.

$$PV = 1000 \times 3.465 \times (1+0.06)$$
$$= \boxed{3,673}$$

Doubling Period

Rule - 72

Divide 72 by Rate of interest

- e.g. If we invest Rs 10000. How long it would take for that Rs 10000 to become Rs 20000 @ 8%.

$$= \frac{72}{8} = 9 \text{ years.}$$

Sinking fund

Sinking fund means a fund which is created for specific purpose by periodic payments over a period of time at a specified rate.

e.g. Debenture Redemption fund

Prov. for Depreciation

Replacement of Assets

$$FV \text{ Annuity} = \text{Annuity} \times \frac{(1+i)^n - 1}{i}$$

- 1) what is the amount you will have in future
- 2) what is the amount to be kept aside to achieve a amount in future.



Q.

How much amount is required to be invested every year so as to accumulate Rs 3,00,000/- at the end of 10 years if the interest is compounded annually @ 10%.

>

$$FV_A = \text{Annuity} \times \frac{(1+i)^n - 1}{i}$$

$$300000 = \text{Annuity} \times \frac{(1+0.10)^{10} - 1}{0.10}$$

$$\text{Annuity} = \frac{300000}{15.9374}$$

$$\text{Annuity} = \underline{\underline{18824}}$$



- 2) A project costs ₹5,00,000 and has a scrap value of ₹1,00,000 after 5 years. The net profit before depreciation and taxes for the five years period are expected to be ₹1,00,000, ₹1,20,000, ₹1,40,000, ₹1,60,000 and ₹2,00,000 respectively. You are required to calculate the accounting rate of return, assuming 50% tax rate and depreciation on straight line method.

[Ans: Profit after depreciation and tax = ₹32,000, ARR = 16%]

- 3) Cash inflow and outflow of a project are given below:

Years	Cash Outflow (₹)	Cash Inflow (₹)
0	75,000	—
1	15,000	10,000
2	—	15,000
3	—	30,000
4	—	40,000
5	—	15,000

The salvage value at the end of 5th year is ₹20,000. The PV factor at 10% discount.

Calculate Net Present Value.

[Ans: Net Present Value = ₹4,430]

- 4) PKL LTD's financial manager have to advise the board of directors on choosing between two competing project proposals, which require an equal investment of ₹50,000 and expected to generate cash flows as under:

Years	Project-I (₹)	Project-II (₹)
1	24,000	10,000
2	16,000	12,000
3	10,000	18,000
4	Nil	24,000
5	12,000	8,000
6	6,000	4,000

Assuming the present value factor @ 10%. Calculate NPV for both the projects.

[Ans: Net Present Value Project I: ₹3,378 Project II: ₹6,136]

- 5) The company has under consideration two mutually exclusive proposals for the purchase of new equipment. Assuming the tax rate to be 50% suggest the management the best alternative using P.V. factor at 10%.

Particulars	Machine X	Machine Y
Net Cash Outflow (₹)	2,00,000	1,50,000
Scrap Value	Nil	Nil
Life (years)	5	5
Profit before depreciation and tax (PBDT) (₹)		
1st year	50,000	36,000
2nd year	60,000	40,000
3rd year	70,000	44,000
4th year	50,000	40,000
5th year	40,000	32,000

Calculate:

- i) Payback Period
ii) Net Present Value

[Ans: Payback Period Machine X: 4 years, 1.5 months (Approx.); Machine Y: 4 years, 3.8 months (Approx.); Net Present Value Machine X: -20,915; Machine Y: -20,150]

- 6) ABC Ltd. is considering investing in a project requiring a cash outflow of ₹1,00,000. Cost of capital as 10%. Depreciation may be taken as 20% on original cost and taxation at 50% of net earnings. Forecast for annual earning after depreciation but before tax (EADBT) is as follows:

Years	₹
1	50,000
2	50,000
3	40,000
4	40,000
5	20,000

Calculate:

- i) Payback method.
ii) Rate of return method (on initial investment).
iii) Rate of return method (on average investment).
iv) Net present value method.

[Ans: Payback Period: 2.25 years; ROR on Initial Investment: 20%; ROR on Average Investment: 40%; NPV: ₹54,065]

- 7) PCB Ltd. invests ₹5,000 in a project, which generates the following cash flow in the next 4 years. The firm has a cost of capital of 10%. The cash inflows are as under:

Years	Cash Inflows (₹)
1	1,500
2	2,500
3	2,500
4	2,500

Calculate profitability index.

[Ans: Profitability index (PI): 4.7]

- 8) You are given the following information relating to ABC Ltd. for the year of recent performance of an asset.
Initial cash outflow ₹1,00,000
Life of the asset 5 years
Estimated annual cash flow ₹25,000

Calculate:

- i) Payback period
ii) IRR
iii) Profitability index (PI)

[Ans: Payback Period: 4 years; IRR: 8.07%, Profitability index (PI): 1.25]

- 9) A Project needs a cash outflow of ₹2,77,000. The cost of capital is 12%. The net cash flows are as under:

Years	₹
1	60,000
2	80,000
3	1,20,000
4	60,000
5	40,000

You are required to calculate NPV and IRR. Suggest whether the project should accepted or not and why?

[Ans: Net Present Value = -13,380; IRR = 10% (Approx)]

- 10) ABC Ltd. is considering two mutually exclusive projects. Both require an initial outlay of ₹1,00,000 each and have a life of 5 years. The company's required rate of return is 10%. The expected cash flows are as follows:

Years	Project X (₹)	Project Y (₹)
1	40,000	60,000
2	40,000	30,000
3	40,000	20,000
4	40,000	50,000
5	40,000	50,000

Determine the net present value and internal rate of return of each project and indicate which project should be selected and why?

[Ans: Net Present Value Project X: ₹51,600; Project Y: ₹59,540; IRR Project X: 28% (Approx); IRR Project Y: 32% (Approx)]

SAVITRIBAI PHULE PUNE UNIVERSITY

MBA - SECOND SEMESTER EXAMINATION, MARCH/APRIL- 2016

FINANCIAL MANAGEMENT

Time: 2½ Hours

Max. Marks: 50

- Note: 1) All questions are compulsory.
 2) Each question has an internal option.
 3) Each question carries 10 marks.
 4) Figures to the right indicate marks for that question/sub-question.
 5) Your answers should be specific and to the point.
 6) Draw neat diagrams and illustrations supportive to your answer.
 7) Use of simple calculator is permitted.

Ques 1 a) "Financial Management is something more than an art of accounting and book-keeping." Explain. (10)

Ans: Yes, the statement is true. Financial management is something more than art of accounting and book keeping in the sense that, accounting function discharges the function of systematic recording of transaction relating to the firm transaction in book of account and summarizing the same for presenting in financial statement. Profit and loss A/c, Balance Sheet, Fund Flow and Cash Flow Statements. Financial Management use other method and techniques like capital budgeting, statistical and mathematical models and computer application in decision making to maximize the value of the firm's wealth and value of the owner's wealth. Financial Management is the key function, many firms prefer to centralize the function to keep constant control on the finance of the firm. This can be further explained by the help of the strategies of financial management.

Key Strategies of Financial Management

Refer Unit-1, Page No.18

Or

Ques 1 b) 'A Finance Manager is a person who is responsible in a significant way to carry out the finance functions.' Justify. (10)

Ans: The statement is true. A finance manager is a person who is responsible in a significant way as finance managers perform data analysis and advise senior managers on profit-maximizing ideas.

Meaning of Finance Manager

Refer Unit-1, Page No. 21

Functions of Financial Managers

Refer Unit-1, Page No. 21

Ques 2 a) Following are the summarised Balance Sheet of Abhijit Ltd. as on 31st March, 2014 and 2015. You are required to prepare a Funds Flow Statement for the year ended 31st March, 2015. (10)

Balance Sheet					
Liabilities	₹	₹	Assets	₹	₹
	31.3.2014	31.3.2015		31.3.2014	31.3.2015
Share Capital	1,00,000	1,25,000	Goodwill	—	2,500
General Reserve	25,000	30,000	Land and Building	1,00,000	95,000
Profit and Loss A/c	15,250	15,300	Plant and Machinery	75,000	84,500

Long-term Bank Loan	35,000	67,600	Stock	50,000	37,000
Creditors	75,000	—	Debtors	40,000	32,100
Provision for Tax	15,000	17,500	Cash in Hand	250	4,300
Total (₹)	2,65,250	2,55,400	Total (₹)	2,65,250	2,55,400

Additional Information:

- i) Depreciation written-off on Plant and Machinery ₹7,000 and on Land and Building ₹5,000.
 ii) Provision for tax was made during the year ₹16,500.
 iii) Dividend of ₹11,500 was paid.

Ans: Refer Unit-2, Page No. 100

Or

Ques 2 b) The standard ratios for the industry and the ratios of Anand Ltd. are given below. Comment on the financial position of the company compared to industry standards and give suggestions for improvement: (10)

Ratio	Industry Standard Ratio	Ratio of Mohit Ltd.
Current Ratio	2.3	2.6
Quick Ratio	1.6	1.10
Inventory Turnover Ratio	6	3
Average Collection Period	40	45
Net Profit Ratio	9%	10%

Ans: Refer Unit-2, Page No. 81

Ques 3 a) i) Explain the importance of Capital Budgeting. (05)

Ans: Importance of Capital Budgeting
 Refer Unit-5, Page No. 200

Ques 3 a) ii) Charulata Ltd. is planning an investment in new project. The investment budget of the company is ₹2,80,000. The company has following two investment alternatives: (05)

Particulars	Year	Project A	Project B
Initial Investment ₹	0	28,000	28,000
Cash Inflows (in ₹)	1	4,000	20,000
	2	8,000	16,000
	3	12,000	8,000
	4	18,000	4,000
	5	24,000	4,000



Compute the Net Present Value at 10% cost of capital and suggest which project is profitable for the company.

Ans: Refer Unit-5, Page No. 210

Or

Ques 3 b) i) Explain the factors influencing Capital Budgeting. (05)

Ans: Factors Influencing Capital Budgeting

Refer Unit-5, Page No. 201

Ques 3 b) ii) From the following information you are required to calculate ARR. An investment costing ₹40,00,000 is expected to produce following profits: (05)

Year	₹
1	3,20,000
2	6,40,000
3	7,20,000
4	2,40,000

Ans: Refer Unit-5, Page No. 206

Ques 4 a) A proforma cost sheet of Deepali Company provides the following data: (10)

Cost per Unit	₹
Raw Material	10
Direct Labour	4
Overheads	6
Total Cost	20
Profit	5
Selling Price	25

The following is the additional information available:

Average raw material in stock – one month.

Average works in process – half a month.

Finished goods in stock – on average one month.

Credit allowed to debtors – 2 months.

Credit allowed by suppliers – one month.

Time lag in payment of wages – one month.

Time lag in payment of overheads – one month.

Cash balance is expected to be ₹25,000.

You are required to prepare a statement showing working capital needed to finance a level of activity of 40,000 units per Total Cost Approach Method of Working Capital Estimation. You may assume that production is carried on evenly throughout the year and wages and overheads accrue.

Ans: Refer Unit-3, Page No. 125

Or

Ques 4 b) Amey Ltd. is commencing a new project to manufacture a plastic component. The following per unit cost information has been ascertained for annual production of 1,00,000 units. (10)

Cost per Unit	₹
Raw Material	40
Direct Labour	15
Overheads (Including Depreciation of ₹5 per Unit)	30
Total Cash Cost	85

Additional Information:

i) Selling price ₹100 per unit.

ii) Raw Materials in Stock, average 4 weeks.

iii) Work-in-progress, average 2 weeks.

iv) Finished Goods in Stock, average 4 weeks.

v) Credit allowed to Customers, average 8 weeks.

vi) Credit allowed by Suppliers, average 4 weeks.

vii) Lag in Payment of Wages, 1.5 weeks.

viii) Cash in Hand is expected to be, ₹50,000.

You may assume that production is carried-out on evenly throughout the year (52 weeks) and wages and overheads accrue similarly. All sales are on credit basis only. You are required to prepare a statement showing working capital requirement as per Cash Cost Approach Method of Working Capital Estimation.

Ans: Refer Unit-3, Page No. 128

Ques 5 a) i) Write a note on factors affecting Capital Structure. (05)

Ans: Factors Affecting the Capital Structure

Refer Unit-4, Page No. 145

Ques 5 a) ii) Pradnya Ltd. has the following capital structure: (05)

Source	₹
Equity Capital (Expected Dividend 12%)	50,000
10% Preference Shares	25,000
8% Loan	75,000

You are required to calculate the WACC, assuming 50% as the rate of Income Tax, before and after tax.

Ans: Refer Unit-4, Page No. 182

Or

Ques 5 b) i) Write a note on importance of capital structure. (05)

Ans: Importance of Capital Structure

Refer Unit-4, Page No. 146

Ques 5 b) ii) Madhuri Ltd. has its books on the following amounts and specific costs of each type of capital: (05)

Type of Capital	Book Value (₹)	Market Value (₹)	Specific Costs (%)
Equity	6,00,000	9,00,000	15
Preference	1,00,000	1,10,000	8
Debt	4,00,000	3,80,000	5
Retained Earnings	2,00,000	3,00,000	13
Total (₹)	13,00,000	16,90,000	

Determine the WACC using:

i) Book Value Weights,

ii) Market Value Weights.

Ans: Refer Unit-4, Page No. 185



SAVITRIBAI PHULE PUNE UNIVERSITY

MBA - SECOND SEMESTER EXAMINATION, 2017

FINANCIAL MANAGEMENT

Time: 2.15 Hours

Max. Marks: 50

- Note: 1) All questions are compulsory with internal options.
2) All questions carries equal marks.

Ques 1 a) Define financial management. Explain goals of financial management. (10)

Ans: Meaning and Definition of Financial Management
Refer Unit 1, Page No. 12

Goals of Financial Management
Refer Unit 1, Page No. 12

Or

Ques 1 b) Explain the functions of finance manager in detail and elaborate the relationship of financial management with other functional disciplines. (10)

Ans: Functions of Finance Manager
Refer Unit 1, Page No. 21

Relationship of Financial Management with other Functional Disciplines/ Finance and Its Relation with Other Disciplines
Refer Unit 1, Page No. 19

Ques 2 a) Explain various factors affecting capital structure of the organisation. (05)

Ans: Factors Affecting Capital Structure of the Organisation
Refer Unit 4, Page No. 145

Ques 2 b) Calculate Weighted Average Cost of Capital (WACC) from the following.
Data of RIL Industries:

Source	(₹) in Lac
Equity share capital [20,000 shares]	40
16% preference share capital	10
14% Debentures	30
	80

The company pays dividend at 10%. Compute Weighted Average Cost of Capital (WACC) based of existing Capital structure. (05)

Ans: Refer Unit 4, Page No. 180

Or

Ques 2 a) State the importance of capital structure decisions in detail. (05)

Ans: Importance of Capital Structure Decisions
Refer Unit 4, Page No. 146

Ques 2 b) Priyadarshini Pvt. Ltd. has following capital structure: (05)

Sources	₹
Equity Capital (Expected Dividend 12%)	10,00,000
10% Preference Capital	5,00,000
8% Loan	15,00,000

Calculate Weighted Average Cost of Capital assuming tax rate of 50% before and after tax.

Ans: Refer Unit 4, Page No. 182

Ques 3 a) From the following balance Sheets prepare fund flow statement and also prepare statement showing changes in working capital.

Balance Sheet					
Liabilities	31/12/94	31/12/95	Assets	31/12/94	31/12/95
Equity Share Capital	1,00,000	1,20,000	Building	55,400	1,13,200
Pref. Share Capital	-	10,000	Machinery	35,600	51,300
General Reserve	6,000	11,000	Furniture	2,400	2,500
Profit and Loss A/C	7,500	20,700	Stock	36,500	38,000
5% Debentures	-	26,000	Debtors	32,100	38,000
Sundry Creditors	43,500	48,400	Bank	4,800	4,000
Bank Overdraft	9,800	10,900			
	1,66,800	2,47,000		1,66,800	2,47,000

Adjustment:

Depreciation written off during the year on machinery is ₹12,800 and on furniture is ₹400. (10)

Ans: Refer Unit 2, Page No. 96

Ques 3 b) Prepare Balance Sheet on the basis of following information given in terms of ratios. (10)

- Debtors Turnover Ratio - 4
 - Creditors Turnover Ratio - 6 (to purchases)
 - Capital Turnover Ratio - 2 (to sales)
 - Stock Turnover Ratio - 8 (to cost of sales)
 - Fixed Asset Turnover Ratio - 8 (to sales)
 - Gross Profit Ratio - 25%
 - Gross Profit during the year - ₹1,00,000
 - Reserves and Surplus - ₹35,000
 - Closing stock is more by ₹20,000 than opening stock.
 - There were no long-term liabilities.
 - All sales are no credit basis.
- Prepare Balance Sheet.

Ans: Refer Unit 2, Page No. 79

Find out Payback Period, Net Present Value and Profitability of Index. (10)

Ans: Refer Unit 5, Page No. 217

Or

Ques 4 b) A leading apparel Mfg. Co. is considering replacement of its existing cutting machine with a new automatic machine to improve the productivity. The cost of new machine is ₹25 lakhs. The cost of the company's capital is 10% the incremental cash flows projected during five years period are estimated as follows:

Year	1	2	3	4	5
Cash Flows (₹ In Lacs)	2.5	5.0	8.0	10.0	12.5
PVF at 10%	0.909	0.826	0.751	0.683	0.621

Comment on the suitability of the project by using NPV and PI. (10)

Ans: Refer Unit 5, Page No. 215

Ques 5 a) From the following projections of XYZ Ltd. for the next year, you are required to work out the Working Capital (WC) required by the company: (10)

Annual Sales	₹14,40,000
Cost of Production Including Depreciation	12,00,000
Raw Material Purchases	7,05,000
Monthly Expenses	30,000
Anticipated Opening Stock of Raw Materials	1,40,000
Anticipated Closing Stock of Raw Materials	1,25,000
Inventory Norms:	
Raw Materials (Month)	2
Work-in-Progress (Days)	15
Finished Goods (Month)	1

The firm enjoys the credit of 15 days on its purchases, and allows 1 month's credit on its supplies. The company has received an advance of ₹15,000 on sales orders. You may assume that production is carried on evenly throughout the year, and minimum cash balance desired to be maintained is ₹10,000.

Ans: Refer Unit 3, Page No. 125

Or

Ques 5 b) From the following information you are required to estimate the net working capital.

Particulars	Cost per Unit (₹)
Raw Material	₹400
Direct Labour	₹150
Overhead (Excluding Depreciation)	₹300
Total Cost	₹850

Additional Information:

- Selling Price: 1000 per unit
- Output: 52,000 units per annum
- Raw Materials in Stock; Average 2 weeks
- Work in Progress (Assume 50% of completion stage with material consumption) Average 2 weeks
- Finished Goods in Stock: Average 4 weeks
- Credit Allowed by Suppliers: Average 4 weeks
- Credit Allowed to Debtors: Average 8 weeks
- Cash at Bank: ₹50,000

Assume that production is carried out evenly throughout the year. Assume 52 weeks equal to one year. All sales are on credit basis. (10)

Ans: Refer Unit 3, Page No. 132



SAVITRIBAI PHULE PUNE UNIVERSITY

MBA - SECOND SEMESTER EXAMINATION - 2019

FINANCIAL MANAGEMENT

Time: 2.15 Hours

Max. Marks: 50

- Note:
- 1) All questions are compulsory.
 - 2) Each question has an internal option.
 - 3) Each question carries 10 marks.
 - 4) Figures to right indicate marks for that question/sub-question.
 - 5) Your answers should be specific and to the point.
 - 6) Draw neat diagrams and illustrations supportive to your answer.
 - 7) Use of simple calculator is permitted.

Ques 1 a) "The wealth maximising objective is superior to the profit maximisation objective", Explain. (10)

Ans: Wealth Maximization is Superior to Profit Maximization

Refer Unit 1, Page No. 15

Or

Ques 1 b) Describe the finance functions as divided into three broad categories. (10)

Ans: Finance Functions/ Modern Approaches to Financial Management

Refer Unit 1, Page No. 18

Ques 2 a) i) Calculate three leverages from the following data: (05)

Units sold (number)	40,000
Unit Sale Price	₹9
Fixed Cost	₹35,000
Variable Cost per Unit	₹7
8% Debt Capital	₹80,000

Ans: Refer Unit 4, Page No. 193

Ques 2 a) ii) The entire capital structure of a company is provided. Determine the after tax Weighted Average Cost of Capital (WACC), assuming the tax rate of 25%. (05)

Components of Capital	₹
Equity Capital (Expected Dividend 11%)	15,00,000
10.5% Preference Shares	10,00,000
9% Debentures	20,00,000

Ans: Refer Unit 4, Page No. 181

Or

Ques 2 b) i) Calculate the Operating, Financial and Combined Leverage from the following information: (05)

Sales	₹60,000
Variable Cost	₹28,000
Interest	₹6,000
Fixed Cost	₹19,000

Ans: Refer Unit 4, Page No. 194

Ques 2 b) ii) Calculate the Weighted Average Cost of Capital (WACC) based on Book Value Weights and Market Value Weights of the company with following capital structure: (05)

Type of Capital	Book Value (₹)	Market Value (₹)	Post Tax Costs %
Equity	10,00,000	14,00,000	14
Preference Shares	4,00,000	4,50,000	9
Debt	10,00,000	8,00,000	7

Ans: Refer Unit 4, Page No. 184

Ques 3 a) The following is Balance Sheet as on 31st March 2016 of the company.

Liabilities	₹	Assets	₹
Equity	6,00,000	Fixed Assets	35,00,000
Shares of ₹10 each		Less: Depreciation	500,000
Reserve Fund	4,00,000	Stock	6,00,000
Profit and Loss A/c	5,00,000	Debtors	5,00,000
Long-Term Loans	20,00,000	Cash	1,00,000
Creditors	4,50,000		
Other Current Liabilities	2,50,000		
	42,00,000		42,00,000

Additional Information:

- i) Profit earned during the year is ₹4,50,000.
- ii) Market Price of Share is ₹500.
- iii) Ignore provisions regarding taxations.

Calculate the following ratios:

- Ques 3 a) i) Debt-Equity Ratio.
- Ques 3 a) ii) Current Ratio.
- Ques 3 a) iii) Acid Test Ratio.
- Ques 3 a) iv) Earning per Share.
- Ques 3 a) v) Price Earning Ratio.

(10)

Ans: Refer Unit 2, Page No. 75



Or

Ques 3 b) The following is summarised Balance Sheet as on 31st March 2015 and 2016 of the company. Prepare a schedule of changes in working capital and funds flow statement for the year ended on 31st March 2016. (10)

Liabilities	2015	2016	Assets	2015	2016
Share Capital	80,000	90,000	Machinery	26,000	38,000
Profit and Loss A/c	13,000	24,000	Building	45,000	45,000
Long-Term Loans	1,000	5,000	Stock	10,000	7,000
Sundry Creditors	8,000	5,000	Sundry Debtors	16,000	22,000
			Cash in Hand	5,000	12,000
	1,02,000	1,24,000		1,02,000	1,24,000

Ans: Refer Unit 2, Page No. 95

Ques 4 a) i) Despite weaknesses, the payback period method is popular in practice? Explain. (05)

Ans: Advantages of Payback Period Method

Refer Unit 5, Page No. 203

Disadvantages/ Weaknesses of Payback Period Method

Refer Unit 5, Page No. 203

Ques 4 a) ii) A company is considering the purchase of a new machine. The cost of machine is ₹22,50,000. The cost cost of company's capital is 10%. The following cash inflows are expected during six year period. The PVF@ 10% is also provided for 6 year period. (05)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cash Flows (₹)	5,35,000	5,86,000	5,59,000	4,80,000	6,14,000	6,37,000
PVF@10%	0.909	0.826	0.751	0.683	0.621	0.564

Comment on suitability of the project by using NPV and PI. (05)

Ans: Refer Unit 5, Page No. 215

Or

Ques 4 b) i) Explain the merits and demerits of the time-adjusted methods of evaluating the investment projects. (05)

Ans: Merits/Advantages of NPV, IRR and PI

Refer Unit 5, Page No. 209, 211, 214

Demerits/ Disadvantages of NPV, IRR and PI

Refer Unit 5, Page No. 209, 212, 214

Ques 4 b) ii) There are two capital investment projects X and Y with initial cost of each is ₹3,00,000. The cash inflows for both projects are given for five year period. (05)

	Year 1	Year 2	Year 3	Year 4	Year 5
Project X (₹)	50,000	70,000	60,000	1,20,000	80,000
Project Y (₹)	60,000	90,000	80,000	60,000	40,000

Appraise the projects based on payback period.

Ans: Refer Unit 5, Page No. 204

Ques 5 a) Prepare a statement showing working capital requirement to finance a level of activity of 10,400 units per year. The cost structure is provided below:

Particulars	Cost/Unit (₹)
Raw Materials	10
Director Labour	5
Overheads	7
Profit	5

Additional Information:

- Average raw material in stock – one month.
 - Average material in process – 2 weeks (assume 50% of completion stage with full material consumption).
 - Average finished goods in stock – one and half month.
 - Credit allowed by suppliers – one month.
 - Credit allowed to debtors – one month.
 - Time lag in payment of wages – 2 weeks.
 - Time lag in payment of overheads – 1 month.
 - Cash basis sales – 25%.
 - Cash balance is expected to be ₹15,000.
- The production is carried out evenly throughout the year. (10)

Ans: Refer Unit 3, Page No. 126

Or

Ques 5 b) From the following information prepare a estimated working capital requirement statement—Projected annual sales 31,200 units. Selling Price per unit is ₹80. (10)

Particular	Cost per Unit as % of Selling Price
Raw Materials	45%
Direct Labour	25%
Overheads	15%

Additional Information:

- Average raw material in stock – 3 weeks.
- Average work in progress – 5 weeks (assume 50% of completion stage with full material consumption).
- Average finished goods in stock – 2 weeks.
- Credit allowed by creditors – 4 weeks.
- Credit allowed to debtors – 3 weeks.
- Time lag in payment of wages and overheads – 2 weeks.
- Cash balance is expected to be ₹40,000.
- All sales are on credit basis only.

The production is carried out evenly throughout the year.

Ans: Refer Unit 3, Page No. 127



UNIT-WISE CLASSIFICATION OF PREVIOUS YEAR QUESTION PAPERS

UNIT 1

Second Semester Examination – 2014

- 1 a) "Financial management is nothing but managerial decision-making on asset mix, capital mix and profit allocation." Explain.
1 b) "Liquidity and profitability are competing goals for the finance manager." Comment.

Second Semester Examination – 2015

- 1 a) "Financial Management is closely related to Economics." Explain.
1 b) "The Finance Manager's primary task is to plan for acquisition and use of funds so as to maximise the value of the firm." Do you agree with the statement? Comment.

Second Semester Examination – 2016

- 1 a) "Financial Management is something more than an art of accounting and book-keeping." Explain.
1 b) 'A Finance Manager is a person who is responsible in a significant way to carry out the finance functions.' Justify.

Second Semester Examination – 2017

- 1 a) Define financial management. Explain goals of financial management.
1 b) Explain the functions of finance manager in detail and elaborate the relationship of financial management with other functional disciplines.

Second Semester Examination – 2018

- 1 a) Describe modern approaches to financial management.
1 b) Explain functions of finance manager and key strategies of financial management.

Second Semester Examination – 2019

- Ques 1 a) "The wealth maximising objective is superior to the profit maximisation objective", Explain.
Ques 1 b) Describe the finance functions as divided into three broad categories.

UNIT 2

Second Semester Examination – 2014

- 2 a) Following is the summarised Balance Sheet of NDA Ltd. as on 31st March, 2013 and 2014. You are required to prepare a Funds Flow statement for the year ended 31st March, 2014.

Second Semester Examination – 2015

- 2 a) The ratios of two leading firms in the Heavy Commercial Vehicles (HCV) sector namely; Tetra Motors and Rapid Auto are provided for the year ended on 31st March 2013. Interpret these ratios and comment on the relative financial performance of the companies.

Balance Sheet

Liabilities	₹	₹	Assets	₹	₹
Share Capital	2,00,000	2,50,000	Goodwill	—	5,000
General Reserve	50,000	60,000	Land and Building	2,00,000	1,90,000
Profit and Loss A/c	30,500	30,600	Plant and Machinery	1,50,000	1,69,000
Bank Loan	70,000	1,35,200	Stock	1,00,000	74,000
Creditors	1,50,000	—	Debtors	80,000	64,200
Provision for Tax	30,000	35,000	Cash in Hand	500	8,600
Total	5,30,500	5,10,800	Total	5,30,500	5,10,800

Additional Information:

- i) Depreciation written-off on Plant and Machinery ₹14,000 and on Land and Building ₹10,000.
ii) Provision for Tax was made during the year ₹33,000.
iii) Dividend of ₹23,000 was paid.
2 b) The standard ratios for the industry and the ratios of UPA Ltd. are given below. Comment on the financial position of the company compared to industry standards and give suggestions for improvement.

Ratio	Industry Standard Ratio	Ratio of UPA Ltd.
Current Ratio	2.4	2.5
Quick Ratio	1.5	1.07
Inventory Turnover Ratio	8	4
Average Collection Period	36	40
Debt-Equity Ratio	2 : 1	1.35 : 1
Net Profit Ratio	7%	7.7%
Price to Earnings Ratio	15	4.88

An investment costing ₹20,00,000 is expected produce following profits:

Year	₹
1	1,60,000
2	3,20,000
3	3,60,000
4	1,20,000

Second Semester Examination – 2014

- 2 a) Following is the summarised Balance Sheet of NDA Ltd. as on 31st March, 2013 and 2014. You are required to prepare a Funds Flow statement for the year ended 31st March, 2014.

Second Semester Examination – 2015

- 2 a) The ratios of two leading firms in the Heavy Commercial Vehicles (HCV) sector namely; Tetra Motors and Rapid Auto are provided for the year ended on 31st March 2013. Interpret these ratios and comment on the relative financial performance of the companies.

Ratios	Tetra Motors	Rapid Auto
Current Ratio	0.62	0.89
Quick Ratio	0.43	0.47
Gross Profit Margin%	4.73	6.78
Net Profit Margin%	2.26	4.24
Total Debt to Equity	0.56	0.82
Fixed Assets Turnover Ratio	1.66	2.01
Inventory Turnover Ratio	11.54	6.63
EPS (₹)	3.91	2.13



- 2 b) From the following balance sheets as on 31st March 2012 and 31st March 2013 of Dayanand Ltd. You are required to prepare funds flow statement.

Balance Sheet

Liabilities	₹		Assets	₹	
	31/03/2012	31/03/2013		31/03/2012	31/03/2013
Equity Capital	3,00,000	4,00,000	Goodwill	1,15,000	90,000
8% Redeemable Pref. Shares	1,50,000	1,00,000	Land and Building	2,00,000	1,70,000
General Reserve	40,000	70,000	Plant	80,000	2,00,000
Profit and Loss A/c	30,000	48,000	Debtors	1,60,000	2,00,000
Proposed Dividend	42,000	50,000	Stock	77,000	1,09,000
Creditors	55,000	83,000	Bills Receivable	20,000	30,000
Bills Payable	20,000	16,000	Cash in Hand	15,000	10,000
Taxation Provision	40,000	50,000	Cash at Bank	10,000	8,000
Total	6,77,000	8,17,000	Total	6,77,000	8,17,000

Following additional information is provided:

- Interim Dividend of ₹20,000 has been paid in 2012-13.
- Income Tax paid during the year 2012-13 is ₹35,000.

Second Semester Examination – 2016

- a) Following are the summarised Balance Sheet of Abhijit Ltd. as on 31st March, 2014 and 2015. You are required to prepare a Funds Flow Statement for the year ended 31st March, 2015.

Balance Sheet

Liabilities	₹ 31.3.2014	₹ 31.3.2015	Assets	₹ 31.3.2014	₹ 31.3.2015
Share Capital	1,00,000	1,25,000	Goodwill	—	2,500
General Reserve	25,000	30,000	Land and Building	1,00,000	95,000
Profit and Loss A/c	15,250	15,300	Plant and Machinery	75,000	84,500
Long-term Bank Loan	35,000	67,600	Stock	50,000	37,000
Creditors	75,000	—	Debtors	40,000	32,100
Provision for Tax	15,000	17,500	Cash in Hand	250	4,300
Total (₹)	2,65,250	2,55,400	Total (₹)	2,65,250	2,55,400

Additional Information:

- Depreciation written-off on Plant and Machinery ₹7,000 and on Land and Building ₹5,000.
 - Provision for tax was made during the year ₹16,500.
 - Dividend of ₹11,500 was paid.
- 2 b) The standard ratios for the industry and the ratios of Anand Ltd. are given below. Comment on the financial position of the company compared to industry standards and give suggestions for improvement:

Ratio	Industry Standard Ratio	Ratio of Mohit Ltd.
Current Ratio	2.3	2.6
Quick Ratio	1.6	1.10
Inventory Turnover Ratio	6	3
Average Collection Period	40	45
Net Profit Ratio	9%	10%

Second Semester Examination – 2017

- 3 a) From the following balance Sheets prepare fund flow statement and so prepare statement showing change in working capital.

Balance Sheet

Liabilities	31/12/94	31/12/95	Assets	31/12/94	31/12/95
Equity Share Capital	1,00,000	1,20,000	Building	55,400	1,13,200
Pref. Share Capital	—	10,000	Machinery	35,600	51,300
General Reserve	6,000	11,000	Furniture	2,400	2,500
Profit and Loss A/C	7,500	20,700	Stock	36,500	38,000
5% Debentures	—	26,000	Debtors	32,100	38,000
Sundry Creditors	43,500	48,400	Bank	4,800	4,000
Bank Overdraft	9,800	10,900			
	1,66,800	2,47,000		1,66,800	2,47,000

Adjustment:

Depreciation written off during the year on machinery is ₹12,800 and on furniture is ₹400.



3 b) Prepare Balance Sheet on the basis of following information given in terms of ratios. (10)

- i) Debtors Turnover Ratio – 4
 - ii) Creditors Turnover Ratio – 6 (to purchases)
 - iii) Capital Turnover Ratio – 2 (to sales)
 - iv) Stock Turnover Ratio – 8 (to cost of sales)
 - v) Fixed Asset Turnover Ratio – 8 (to sales)
 - vi) Gross Profit Ratio – 25%
 - vii) Gross Profit during the year – ₹1,00,000
 - viii) Reserves and Surplus – ₹35,000
 - ix) Closing stock is more by ₹20,000 than opening stock.
 - x) There were no long-term liabilities.
 - xi) All sales are on credit basis.
- Prepare Balance Sheet.

Second Semester Examination – 2018

3 a) The following data are extracted from the published accounts of two companies, ABC Ltd. and XYZ Ltd. In an industry.

Particulars	ABC Ltd. (₹)	XYZ Ltd. (₹)
Sales	32,00,000	30,00,000
Net Profit after Tax	1,23,000	1,58,000
Equity Capital (₹10 per Share Fully Paid)	10,00,000	8,00,000
General Reserves	2,32,000	6,42,000
Long-term Debt	8,00,000	5,60,000
Creditors	3,82,000	5,49,000
Bank Credit (short-term)	60,000	2,00,000
Fixed Assets	15,99,000	15,90,000
Inventories	3,31,000	8,09,000
Other Current Assets	5,44,000	4,52,000

Prepare a statement of comparative ratios showing Liquidity, Profitability, Activity and Financial Position of the two companies.

3 b) Prepare Fund Flow statement.

Liabilities	31/03/2008	31/03/2009	Assets	31/03/2008	31/03/2009
Bank OD	1,16,000	55,000	Fixed Assets	62,000	70,000
Creditors	99,800	1,19,200	Addition	8,000	17,000
Prop. Div.	16,000	24,000		70,000	87,000
Debentures		10,000	Depreciation	25,000	36,000
P & L	35,200	48,500	Net	45,000	51,000
General Reserves	26,000	38,000	Investment	10,000	15,000
Share Capital	75,000	1,00,000	Stock	1,81,500	1,90,000
			Debentures	1,31,500	1,38,700
	3,68,000	3,94,700		3,68,000	3,94,700

Second Semester Examination – 2019

Ques 3 a) The following is Balance Sheet as on 31st March 2016 of the company.

Liabilities	₹	Assets	₹
Equity Shares of ₹10 each	6,00,000	Fixed Assets	35,00,000
Reserve Fund	4,00,000	Less: Depreciation	50,000
Profit and Loss A/c	5,00,000	Stock	6,00,000
Long-Term Loans	20,00,000	Debtors	5,00,000
Creditors	4,50,000	Cash	1,00,000
Other Current Liabilities	2,50,000		
	42,00,000		42,00,000

Additional Information:

- i) Profit earned during the year is ₹4,50,000.
- ii) Market Price of Share is ₹500.
- iii) Ignore provisions regarding taxation.

Calculate the following ratios:

Ques 3 a) i) Debt-Equity Ratio.



- Ques 3 a) ii) Current Ratio.
 Ques 3 a) iii) Acid Test Ratio.
 Ques 3 a) iv) Earning per Share.
 Ques 3 a) v) Price Earning Ratio.

Ques 3 b) The following is summarised Balance Sheet as on 31st March 2015 and 2016 of the company. Prepare a schedule of changes in working capital and funds flow statement for the year ended on 31st March 2016. (10)

Liabilities	2015	2016	Assets	2015	2016
Share Capital	80,000	90,000	Machinery	26,000	38,000
Profit and Loss A/c	13,000	24,000	Building	45,000	45,000
Long-Term Loans	1,000	5,000	Stock	10,000	7,000
Sundry Creditors	8,000	5,000	Sundry Debtors	16,000	22,000
			Cash in Hand	5,000	12,000
	1,02,000	1,24,000		1,02,000	1,24,000



UNIT 3

Second Semester Examination – 2014

- 4 a) A proforma cost sheet of a company provides the following data:

Cost Per Unit	₹
Raw Material	20
Direct Labour	8
Overheads	15
Total Cost	43
Profit	7
Selling Price	50

The following is the additional information

Available raw material in stock – one month
 Average works in process – half a month
 Finished goods in stock – on average one month
 Credit allowed to debtors – 2 months
 Credit allowed by suppliers – one month
 Time lag in payment of wages – one month
 Time lag in payment of overheads – one month
 Cash balance is expected to be ₹90,000
 You are required to prepare a statement showing working capital needed to finance a level of activity of 52,000 units of output as per Total Approach method of Working Capital Estimation. You may assume that production is carried on evenly throughout the year and wages and overheads accrue.

- 4 b) Namo Ltd. is commencing a new project to manufacture a plastic component. The following per unit cost information has been ascertained for annual production of 1,04,000 units:

Cost Per Unit	₹
Raw Material	80
Direct Labour	30
Overheads (Including Depreciation of ₹10 per unit)	60
Total Cash Cost	170

Additional Information

- i) Selling price ₹200 per unit.
 ii) Raw materials in stock, average 4 weeks.
 iii) Work-in-progress, average 2 weeks.

- iv) Finished goods in stock, average 4 weeks.
 v) Credit allowed to customers, average 8 weeks.
 vi) Credit allowed by suppliers, average 4 weeks.
 vii) Lag in payment of wages, 1.5 weeks.
 viii) Cash in hand is expected to be, ₹25,000.

You may assume that production is carried-out on evenly throughout the year (52 weeks) and wages and overheads accrue similarly. All Sales are on credit basis only. You are required to prepare a statement showing working capital requirement as per Cash Cost Approach method of Working Capital Estimation.

Second Semester Examination – 2015

- 4 a) A proforma cost-sheet of a company provides the following particulars:

Element of Cost	Cost per Unit (₹)
Raw Material	80
Direct Labour	30
Overheads	60
Total Cost of Production	170
Profit	30
Selling Price	200

Following further particulars are available:

- i) Raw materials are in stock on an average one month.
 ii) Materials are in process on an average half a month.
 iii) Finished goods are in stock on an average one month.
 iv) Credit allowed by suppliers is one month.
 v) Credit allowed to debtors is two months.
 vi) Lag in payment of wages and overheads are 1 month.
 vii) One fourth of the output is sold against cash.
 viii) Cash on hand and at bank is expected to be ₹25,000.

You are required to prepare a statement showing the working capital needed as per total approach method of working capital to finance a level of activity of

60,000 units of production annually. The production is carried-out evenly throughout the year.

- 4 b) The cost structure of a company's product is as follows:

Cost per Unit	₹
Raw Material	20
Direct Labour	5
Overheads	15
Total Cost of Production	40
Profit	10
Selling Price	50

- The annual production is 2,40,000 units.
- It is the policy of the company to maintain the stock of raw materials equivalent to one month's production.
- Half a month's production will remain in process throughout the year (Stage of completion 50%).
- The finished goods remain in warehouse on an average for a month.
- The company sells its goods on credit and allows two months credit to its customers.
- The suppliers of raw materials provide 3 months credit to the company.
- The period of lag for wages and overheads is one month.
- A minimum cash balance of ₹25,000 is expected to be maintained.

You are required to prepare a statement showing working capital requirement as per cash cost approach method of working capital estimation.

Second Semester Examination – 2016

- 4 a) A proforma cost sheet of Deepali Company provides the following data:

Cost per Unit	₹
Raw Material	10
Direct Labour	4
Overheads	6
Total Cost	20
Profit	5
Selling Price	25

The following is the additional information available:

- Raw material in stock – one month.
- Average works in process – half a month.
- Finished goods in stock – on average one month.
- Credit allowed to debtors – 2 months.
- Credit allowed by suppliers – one month.
- Time lag in payment of wages – one month.
- Time lag in payment of overheads – one month.
- Cash balance is expected to be ₹25,000.

You are required to prepare a statement showing working capital needed to finance a level of activity of 40,000 units per Total Cost Approach Method of Working Capital Estimation. You may assume that production is carried on evenly throughout the year and wages and overheads accrue.

- 4 b) Amey Ltd. is commencing a new project to manufacture a plastic component. The following per unit cost information has been ascertained for annual production of 1,00,000 units.

Cost per Unit	₹
Raw Material	40
Direct Labour	15
Overheads (Including Depreciation of ₹5 per Unit)	30
Total Cash Cost	85

Additional Information:

- Selling price ₹100 per unit.
- Raw Materials in Stock, average 4 weeks.
- Work-in-progress, average 2 weeks.
- Finished Goods in Stock, average 4 weeks.
- Credit allowed to Customers, average 8 weeks.
- Credit allowed by Suppliers, average 4 weeks.
- Lag in Payment of Wages, 1.5 weeks.
- Cash in Hand is expected to be, ₹50,000.

You may assume that production is carried-out on evenly throughout the year (52 weeks) and wages and overheads accrue similarly. All sales are on credit basis only. You are required to prepare a statement showing working capital requirement as per Cash Cost Approach Method of Working Capital Estimation.

Second Semester Examination – 2017

- 5 a) From the following information you are required to estimate the net working capital.

Particulars	Cost Per Unit (₹)
Raw Material	400
Director Labour	150
Overhead (Excluding Depreciation)	300
Total Cost	850

Additional Information:

Selling Price	₹1000 per unit
Output	₹52,000 units per annum
Raw materials in stock	Average 4 weeks
Work in progress (Assume 50% of completion stage with full material consumption)	Average 2 weeks
Finished goods in stock	Average 4 weeks
Credit allowed by suppliers	Average 4 weeks
Credit allowed to debtors	Average 8 weeks
Cash at bank	₹50,000



Assume that production is carried out evenly throughout the year. Assume 52 weeks equal to one year. All sales are on credit basis.

Or

5 b) Mithila Industries Ltd. commencing a new project. Following per unit cost information is given. Annual production is 1,00,000 units.

Particulars	Cost Per Unit (₹)
Raw Materials	40
Direct Labour	15
Overheads	25
Depreciation	05
Total Cost	85

Additional Information:

- Selling price is ₹100 per unit.
- Raw materials in stock average 4 weeks.
- Work in progress average 2 weeks. (Assume 50% of completion stage with full material consumption.)
- Finished goods in stock average 4 weeks.
- Credit allowed to customers 8 weeks.
- Credit allowed to suppliers average 4 weeks.
- Lag in the payment of wages and overheads 1.5 weeks.
- Cash-in-hand expected to be ₹50,000.

Production is carried out evenly throughout the year (52 weeks) and wages and overheads accrue similarly all sales are on credit basis. Calculate net working capital as per 'Cash Cost Approach Method' of working capital.

Second Semester Examination – 2018

5 a) From the following projections of XYZ Ltd. for the next year, you are required to work out the Working Capital (WC) required by the company:

Annual Sales	₹14,40,000
Cost of Production Including Depreciation ₹1,20,000	12,00,000
Raw Material Purchases	7,05,000
Monthly Expenses	30,000
Anticipated Opening Stock of Raw Materials	1,40,000
Anticipated Closing Stock of Raw Materials	1,25,000
Inventory Norms:	
Raw Materials (Month)	2
Work-in-Progress (Days)	15
Finished Goods (Month)	1

The firm enjoys the credit of 15 days on its purchases, and allows 1 month's credit on its supplies. The company has received an advance of ₹15,000 on sales orders. You may assume that production is carried on evenly throughout the year, and minimum cash balance desired to be maintained is ₹10,000.

Or

5 b) From the following information you are required estimate the net working capital.

Particulars	Cost per Unit (₹)
Raw Material	₹400
Direct Labour	₹150
Overhead (Excluding Depreciation)	₹300
Total Cost	₹850

Additional Information:

- Selling Price: 1000 per unit
- Output: 52,000 units per annum
- Raw Materials in Stock; Average 2 weeks
- Work in Progress (Assume 50% of completion stage with material consumption) Average 2 weeks
- Finished Goods in Stock: Average 4 weeks
- Credit Allowed by Suppliers: Average 4 weeks
- Credit Allowed to Debtors: Average 8 weeks
- Cash at Bank: ₹50,000

Assume that production is carried out evenly throughout the year. Assume 52 weeks equal to one year. All sales are on credit basis.

Second Semester Examination – 2019

Ques 5 a) Prepare a statement showing working capital requirement to finance a level of activity of 10,400 units per year. The cost structure is provided below:

Particulars	Cost/Unit (₹)
Raw Materials	10
Director Labour	5
Overheads	7
Profit	5

Additional Information:

- Average raw material in stock – one month.
- Average material in process – 2 weeks (assume 50% of completion stage with full material consumption).
- Average finished goods in stock – one and half month.
- Credit allowed by suppliers – one month.
- Credit allowed to debtors – one month.
- Time lag in payment of wages – 2 weeks.
- Time lag in payment of overheads – 1 month.
- Cash basis sales – 25%.
- Cash balance is expected to be ₹15,000.

The production is carried out evenly throughout the year.

Ques 5 b) From the following information prepare a estimated working capital requirement statement– Projected annual sales 31,200 units. Selling Price per unit is ₹80.

Particular	Cost per Unit as % of Selling Price
Raw Materials	45%
Direct Labour	25%
Overheads	15%



Additional Information:

- Average raw material in stock – 3weeks.
- Average work in progress – 5weeks (assume 50% of completion stage with full material consumption).
- Average finished goods in stock – 2weeks.
- Credit allowed by creditors – 4weeks.
- Credit allowed to debtors – 3weeks.
- Time lag in payment of wages and overheads – 2weeks.
- Cash balance is expected to be ₹40,000.
- All sales are on credit basis only.

The production is carried out evenly throughout the year.

UNIT 4**Second Semester Examination – 2014**

- Write a note on Capital Structure.
- Mamta Ltd. has the following capital structure:

Source	₹
Equity Capital (Expected dividend 12%)	5,00,000
10% Preference Shares	2,50,000
8% Loan	7,50,000

You are required to calculate the WACC, assuming 50% as the rate of Income Tax, before and after tax.

- Maya Ltd. has its books on the following amounts and specific costs of each type of capital.

Type of Capital	Book Value	Market Value	Specific Costs %
Equity	3,00,000	4,50,000	15
Preference	50,000	55,000	8
Debt	2,00,000	1,90,000	5
Retained Earnings	1,00,000	1,50,000	13
Total (₹)	6,50,000	8,45,000	

Determine the WACC using:

- Book Value Weights
- Market Value Weights

Second Semester Examination – 2015

- A leading company manufacturing cosmetics is in need of a capital for its expansion plans. Which factors do you think are required to be considered for raising the long-term funds to finance the plan?

- The entire capital structure of a company is provided alongwith the tax adjusted cost of each component. Determine the Weighted Average Cost of Capital (WACC).

Components of Capital	₹	Tax Adjusted Cost of Capital
12% Debentures	30,00,000	8%
9% Preference Shares	20,00,000	9%
Equity Shares	50,00,000	14%

- State the various assumptions made in capital structure theories.

- Rajaram Ltd. has the following capital structure:

Particulars	Market Values	Book Values	Component Cost % (Post-tax)
Equity Capital	80	120	18
Preference Share Capital	30	20	15
Secured Debentures	40	40	14

Calculate Weighted Average Cost of Capital (WACC) of the company based on both book and market values.

Second Semester Examination – 2016

- Write a note on factors affecting Capital Structure.

- Pradnya Ltd. has the following capital structure:

Source	₹
Equity Capital (Expected Dividend 12%)	50,000
10% Preference Shares	25,000
8% Loan	75,000

You are required to calculate the WACC, assuming 50% as the rate of Income Tax, before and after tax.

- Write a note on importance of capital structure.
- Madhuri Ltd. has its books on the following amounts and specific costs of each type of capital:

Type of Capital	Book Value (₹)	Market Value (₹)	Specific Costs (%)
Equity	6,00,000	9,00,000	15
Preference	1,00,000	1,10,000	8
Debt	4,00,000	3,80,000	5
Retained Earnings	2,00,000	3,00,000	13
Total (₹)	13,00,000	16,90,000	

Determine the WACC using:

- Book Value Weights, ii) Market Value Weights.

Second Semester Examination – 2017

- Explain various factors affecting capital structure of the organisation.
- Calculate Weighted Average Cost of Capital (WACC) from the following.

Data of RIL Industries:

Source	(₹) in Lac
Equity share capital [20,000 shares]	40
16% preference share capital	10
14% Debentures	30
	80

The company pays dividend at 10%. Compute Weighted Average Cost of Capital (WACC) based of existing capital structure.

2 a) State the importance of capital structure decisions in detail.

2 b) Priyadarshini Pvt. Ltd. has following capital structure:

Sources	₹
Equity Capital (Expected Dividend 12%)	10,00,000
10% Preference Capital	5,00,000
8% Loan	15,00,000

Calculate Weighted Average Cost of Capital assuming tax rate of 50% before and after tax.

Second Semester Examination – 2018

2 a i) Explain factors affecting capital structure.

2 a ii) Mamta limited has following capital structure:

Source	₹
Equity Capital (Expected Dividend 12%)	5,00,000
10% Preference Shares	2,50,000
8% Loan	7,50,000

You are required to calculate the WACC, Assuming 50% as the rate of Income tax before and after tax.

2 b i) Explain concept and measurement of cost of capital.

2 b ii) The entire capital structure of a company is provided along with the tax adjusted cost of each component. Determine the WACC.

Source	Amount (₹)	Tax Adjusted Cost of Capital
12% Debenture	30,00,000	8%
9% Preference Share Capital	20,00,000	9%
Equity Shares	50,00,000	14%

Second Semester Examination – 2019

Ques 2 a) i) Calculate three leverages from the following data:

Units sold (number)	40000
Unit Sale Price	₹9
Fixed Cost	₹35,000
Variable Cost per Unit	₹7
8% Debt Capital	₹80,000

Ques 2 a) ii) The entire capital structure of a company is provided. Determine the after tax Weighted Average Cost of Capital (WACC), assuming the tax rate of 25%.

Components of Capital	₹
Equity Capital (Expected Dividend 11%)	15,00,000
10.5% Preference Shares	10,00,000
9% Debentures	20,00,000

Ques 2 b) i) Calculate the Operating, Financial and Combined Leverage from the following information:

Sales	₹60,000
Variable Cost	₹28,000
Interest	₹6,000
Fixed Cost	₹19,000

Ques 2 b) ii) Calculate the Weighted Average Cost of Capital (WACC) based on Book Value Weights and Market Value Weights of the company with following capital structure:

Type of Capital	Book Value (₹)	Market Value (₹)	Post Tax Costs %
Equity	10,00,000	14,00,000	14
Preference Shares	4,00,000	4,50,000	9
Debt	10,00,000	8,00,000	7

UNIT 5

Second Semester Examination – 2014

3 a) i) 'Capital Budgeting decisions are quite critical in nature.' Justify.

3 a) ii) Mahendra Ltd. is planning an investment in new project. The investment budget of the company is ₹2,80,000. The company has following two investment alternatives:

Particulars	Year	Project P	Project Q
Initial Investment ₹	0	2,80,000	2,80,000
Cash Inflows (in ₹)	1	40,000	2,00,000
	2	80,000	1,60,000
	3	1,20,000	80,000
	4	1,80,000	40,000
	5	2,40,000	40,000

Compute the Net Present Value at 10% cost of capital and suggest which project is profitable for the company.

3 b) i) Explain with example the term 'Profitability Index'.

3 b) ii) From the following information you are required calculate ARR.

An investment costing ₹20,00,000 is expected produce following profits:

Year	₹
1	1,60,000
2	3,20,000
3	3,60,000
4	1,20,000

5 b) i) Write a note on NI Approach.

Second Semester Examination – 2015

3 a) i) What are the different types of capital budgeting decisions?

3 a) ii) A leading apparel manufacturing Company is considering a replacement of its existing cutting machine with a new automatic machine to improve the productivity. The cost of new machine is (₹) 25 lac. The cost of the company's capital is 10%. The incremental cashflows projected during five year period are estimated as follows:

	Year 1	Year 2	Year 3	Year 4	Year 5
Cashflows (₹ in Lac)	2.5	5.00	8.00	10.00	12.5
PVF @ 10%	0.909	0.826	0.751	0.683	0.621

Comment on the suitability of the project by using NPV and PL.



3 b) i) Why capital expenditure budget is required for corporate organisations?

3 b) ii) A leading company in the infrastructure contracts is considering a proposal for the purchase of earth moving equipment. The data on the proposal is given below:

Cost of the machine (₹)	30,00,000
Life of the machines	6 years
Depreciation	Straight line method
Salvage value (₹)	Nil

The estimated cashflows before depreciation and income tax in different years as follows:



Year	₹
1	7,50,000
2	8,00,000
3	8,50,000
4	10,00,000
5	12,00,000
6	14,00,000
Total	60,00,000

The corporate tax rate is 30%. You are required to calculate the cashflows after tax but before depreciation and comment on the suitability of the machine bases on pay-back period.

Second Semester Examination – 2016

3 a) i) Explain the importance of Capital Budgeting.

3 a) ii) Charulata Ltd. is planning an investment in new project. The investment budget of the company is ₹2,80,000. The company has following two investment alternatives:

Particulars	Year	Project A	Project B
Initial Investment ₹	0	28,000	28,000
Cash Inflows (in ₹)	1	4,000	20,000
	2	8,000	16,000
	3	12,000	8,000
	4	18,000	4,000
	5	24,000	4,000

Compute the Net Present Value at 10% cost of capital and suggest which project is profitable for the company.

3 b) i) Explain the factors influencing Capital Budgeting.

3 b) ii) From the following information you are required to calculate ARR. An investment costing ₹40,00,000 is expected to produce following profits:

Year	₹
1	3,20,000
2	6,40,000
3	7,20,000
4	2,40,000

Second Semester Examination – 2017

4 a) From the following information of Rushi Pvt. Ltd., suggest which of the machine to be purchased.

Expected earnings after tax are given below. Each machine requires investment of ₹4,00,000.

Year	Machine-A Cashflow	Machine – B Cashflow
0	(4,00,000)	(4,00,000)
1	40,000	1,20,000
2	1,20,000	1,60,000
3	1,60,000	2,00,000
4	2,40,000	1,20,000
5	1,60,000	80,000

Cost of capital is 10%. Calculate net present value and profitability index.

4 b) Balkrishna Industries Ltd. has following investment proposal which requires investment of ₹53,00,000 and has following income as cash inflows.

Year	Cash Inflows
1	16,00,000
2	18,00,000
3	20,00,000
4	15,00,000
5	15,00,000
6	10,00,000

Assume cost of capital as 10%. Calculate pay-back period, net present value and profitability index.

Second Semester Examination – 2018

4 a) ABC Ltd. is planning investment in new project. The investment of the company is ₹30,00,000. The company has following two alternatives. Assume Cost of Capital at 12%

Particulars	Project A	PV at 12%
1	7,00,000	0.893
2	10,00,000	0.797
3	9,00,000	0.712
4	8,00,000	0.636
5	4,00,000	0.567

Find out Payback Period, Net Present Value and Profitability of Index.

4 b) A leading apparel Mfg. Co. is considering replacement of its existing cutting machine with a new automatic machine to improve the productivity. The cost of new machine is ₹25 lakhs. The cost of the company's capital is 10% the incremental cash flows projected during five years period are estimated as follows:

Year	1	2	3	4	5
Cash Flows (₹ In Lacs)	2.5	5.0	8.0	10.0	12.5
PVF at 10%	0.909	0.826	0.751	0.683	0.621

Comment on the suitability of the project by using NPV and PI.

Second Semester Examination – 2019

Ques 4 a) i) Despite weaknesses, the payback period method is popular in practice? Explain.

Ques 4 a) ii) A company is considering the purchase of a new machine. The cost of machine is ₹22,50,000. The cost of company's capital is 10%. The following cash inflows are expected during six year period. The PVF@ 10% is also provided for 6 year period.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cash Flows (₹)	5,35,000	5,86,000	5,59,000	4,80,000	6,14,000	6,37,000
PVF@10%	0.909	0.826	0.751	0.683	0.621	0.564

Comment on suitability of the project by using NPV and PI.

Ques 4 b) i) Explain the merits and demerits of the time-adjusted methods of evaluating the investment projects. (05)

Ques 4 b) ii) There are two capital investment projects X and Y with initial cost of each is ₹3,00,000. The cash inflows for both projects are given for five year period.

	Year 1	Year 2	Year 3	Year 4	Year 5
Project X (₹)	50,000	70,000	60,000	1,20,000	80,000
Project Y (₹)	60,000	90,000	80,000	60,000	40,000

Appraise the projects based on payback period.



MODEL PAPER**FINANCIAL MANAGEMENT****MBA – SECOND SEMESTER EXAMINATION****Time: 2 ½ Hours****Max. Marks: 50****Note: 1) All questions shall be compulsory with internal choice within the questions.****2) FIVE questions each carries 10 marks.****3) Figures to the right indicate marks for that question/sub-question.****1) Answer any 5 out of 8:****(2 marks each)**

- What do you mean by profit maximisation?
- Define earnings per share.
- What is operating cycle?
- Discuss gross working capital.
- What is operating leverage?
- Discuss profitability index.
- What do you understand by internal rate of return?
- Who is finance manager?

2) Answer any 2 out of 3:**(5 marks each)**

- Discuss the functions of financial management.
- Calculate the following ratios:
 - Gross profit ratio
 - Net profit ratio
 - Current ratio
 - Liquid ratio
 - Proprietary ratio

Particulars	₹	Particulars	₹
Sales	30,00,000	Fixed assets	15,40,000
Cost of sales	20,00,000	Net worth	16,40,000
Net profit	4,00,000	Debts (long-term)	9,00,000
Average inventory	8,00,000	Current liabilities	5,00,000
Other current assets	7,00,000	Net profit before Tax and Interest	8,00,000

c) From the following particulars, of Sun Pharma Ltd.

Particulars	2018	2017
Revenue from operations	₹10,00,000	₹6,00,000
Cost of materials consumed	60% of revenue from operations	50% of revenue from operations
Indirect expenses	30% of cost of materials consumed	20% of cost of materials consumed
Tax rate	40%	40%

Prepare a common size statement of profit and loss.

3) a) From the following data, compute the duration of the net operating cycle for each of the two years and comment on the increase/decrease:

(10 marks)

Particulars	₹ (in Thousands)	
	Year 1	Year 2
Stocks:		
Raw materials	20	27
Work-in-progress	14	18
Finished Goods	21	24
Purchases	96	135
Cost of Goods Sold	140	180
Sales	160	200
Debtors	32	50
Creditors	16	18

Assume 360 days per year for computational purposes.

Or

- b) The following are the extracts from the balance sheet of a company as on 31-3-2016. Compute the net working capital required by the company for the year ending 31-3-2017. (10 marks)

Balance Sheet as on 31-03-2016

Particulars	₹	₹
Fixed Assets		
Land and buildings	5,00,000	
Plant and machinery	3,00,000	8,00,000
Current Assets		
Stock	8,00,000	
Debtors	3,00,000	
Cash and bank	2,00,000	
	13,00,000	
Less: Current Liabilities		
Creditors	3,40,000	
Taxation	80,000	
Bank overdraft	1,40,000	
Bills payable	1,60,000	
	7,20,000	
Working Capital		5,80,000
		13,80,000

Additional Information

- It is estimated that sale will increase by 25% next year.
 - Maximum amount of overdraft that can be availed will be only ₹1,60,000.
 - There will be no increase in the liability, due to increase in exports.
 - Period of credit allowed to customers and stock turnover will remain unaltered.
 - Period of credit allowed by creditors and that for bills payable will remain the same.
 - There will be no increase in total amount of cash and bank balances.
- 4) a) Priyadarshini Pvt. Ltd. has following capital structure: (10 marks)

Sources	₹
Equity Capital (Expected Dividend 12%)	10,00,000
10% Preference Capital	5,00,000
8% Loan	15,00,000

Calculate Weighted Average Cost of Capital assuming tax rate of 50% before and after tax.

Or

- b) Calculate operating leverage, financial leverage and combined leverage from the following information: (10 marks)

Particulars	X Company Ltd. (₹)	Y Company Ltd. (₹)
Sales	25,00,000	35,00,000
Variable Cost	7,00,000	11,00,000
Fixed Cost	8,00,000	10,00,000
Interest	3,00,000	4,00,000

- 5) a) A company issues 10% irredeemable debentures of ₹1,00,000. The company is in the 55% tax bracket. Calculate the cost of debt (before and after tax) if the debentures are issued (10 marks)

i) At Par;	ii) 10% discount; and
iii) 10% premium.	

Or

- b) Balkrishna Industries Ltd. has following investment proposal which requires investment of ₹53,00,000 and has following income as cash inflows. (10 marks)

Year	Cash Inflows
1	16,00,000
2	18,00,000
3	20,00,000
4	15,00,000
5	15,00,000
6	10,00,000

Assume cost of capital as 10%. Calculate pay-back period, net present value and profitability index.



Internal Examination July 2022

MBA Semester II

Subject – (202) Financial Management

Max Marks 50

Time 2 Hrs

Instructions:

- A. All Questions are compulsory (10 marks each)
- B. Each question has an internal option.
- C. Use of simple calculator is permitted.

Q.1. 'A Finance Manager is a person who is responsible in a significant way to carry out the finance functions.' Justify. (10)

OR

Q.1. "The wealth maximizing objective is superior to the profit maximization objective". Explain (10)

Q.2. a) Calculate OL, FL and CL from the following (5)

A company has sales of Rs. 1,00,000. The variable cost is 40% of the sales while the Fixed operating cost amount to Rs. 30,000. The amount of interest on long term loan Debt is Rs. 10,000.

b) Calculate Weighted Average Cost of Capital (WACC) from the following based on Book Value Weights and Market Value Weights of the following capital structure and The company pays dividend at 10%. (5)

Sources	Book Value (Rs.)	Market Value (Rs.)	Post Tax Costs %
Equity Share capital	10,00,000	14,00,000	14
Preference share capital	4,00,000	4,50,000	9
Debentures	10,00,000	8,00,000	7

OR

Q.2. a) Calculate three leverages from the following (5)

Units sold (number)	50000
Units Sales Price	Rs. 10
Fixed Cost	Rs. 30000
Variable cost per unit	Rs. 6
10% Debt Capital	Rs. 70000



- b) The entire capital structure of a company is provided. Calculate Weighted Average Cost of Capital (WACC) before tax and after tax, assuming the tax rate of 25% (5)

Components of Capital	(Rs.)
Equity Share capital (Expected Dividend 11%)	15,00,000
10.5% preference share capital	10,00,000
9% Debentures	20,00,000

- Q.3. The standard ratios for the industry and the ratios of Rina Ltd. are given below. Comment on the financial position of the company compared to industry Standards and give suggestions for improvement: (10)

Ratios	Industry Standard Ratio	Ratio of Rina Ltd
Current Ratio	2.3	2.6
Quick Ratio	1.06	1.10
Inventory Turnover Ratio	6	3
Average Collection Period	40	45
Net Profit Ratio	9%	10%

OR

- Q.3. From the following balance sheet prepare fund flow statement and also prepare Statement showing changes in working capital. (10)

Liabilities	31/03/21	31/03/22	Assets	31/03/21	31/03/22
Equity Share Capital	100000	120000	Building	55400	113200
Pref. Share Capital	--	10000	Machinery	35600	51300
General Reserve	6000	11000	Furniture	2400	2500
Profit & Loss A/c	7500	20700	Stock	36500	38000
5 % Debentures	--	26000	Debtors	32100	38000
Sundry Creditors	43500	48400	Bank	4800	4000
Bank Overdraft	9800	10900			
	166800	247000		166800	247000

Adjustment:- Depreciation written off during the year on machinery is Rs. 12800 and on Furniture is Rs. 400.

- Q.4. PQR Ltd. is planning investment in new project. The investment of the company is Rs. 30,00,000. Assume cost of capital at 12%. Find out Payback period, NPV and Profitability Index. (10)

Year	Cash Inflow (Rs.)
1	7,00,000
2	10,00,000
3	9,00,000
4	8,00,000
5	4,00,000



OR

- Q.4. a) What are the factors affecting working capital requirement? (5)
b) Write a note on importance of capital structure planning. (5)

- Q.5 From the following information prepare a estimated working capital requirement Statement – (10)

- 1) Projected annual sales 31200 units. Selling price per unit is Rs. 80
- 2) Raw material 45% of Selling price. Direct Labour 25% of selling price. Overheads 15% of selling price
- 3) Average raw material in stock – 3 weeks.
- 4) Average work in progress – 5 weeks (assume 50% of completion stage with full Material consumption).
- 5) Average Finished Good in stock – 2 weeks.
- 6) Credit allowed by creditors – 4 weeks.
- 7) Credit allowed to Debtors – 3 weeks.
- 8) Time lag in payment of wages and overheads – 2 weeks.
- 9) Cash balance is expected to be Rs. 40000.
- 10) All sales are on credit basis only.

OR

- Q.5. Answer any five : (10)

- 1) Define Earning Per Share
- 2) What is Operating Cycle?
- 3) What is Gross Working Capital and Net Working Capital?
- 4) What is Combined Leverage?
- 5) What is NPV?
- 6) What is Trading on Equity?
- 7) Define Time Value of Money.



Financial Management

MBA - I Sem - II

2022-July

Answer Key

Q.1 "A finance Manager is a person who is responsible in a significant way to carry out the finance functions." Justify.

Ans:- functions or Role of finance Manager

- ① Raising funds for company
- ② Taking maximum benefits from leverage
- ③ Investment Decision
- ④ Risk Management
- ⑤ formation of Capital Structure.
- ⑥ Allocation of profit
- ⑦ financial control etc.

Q.1 The Wealth maximizing objective is superior to the profit maximization objective. Explain

Ans:- limitations of profit maximising objective

- ① The profit is an ambiguous & confusing concept. It has no specific implication
- ② It does not consider the time value of money
- ③ It also ignores the quality aspect of benefits & returns associated with a financial activity
- ④ Increased profit may often lead to the orgⁿ producing such products or services which may not be beneficial & useful to society.
- ⑤ It ignores financing & Dividend aspects
- ⑥ Competition will also increase.



Advantages of wealth maximising objective

- ① The sole endeavour of the business firm is to enhance the value or wealth of shareholders
- ② It also involves comparison of the value & cost associated with the firm.

③ It takes into consideration time value of money & risk factors of the firm.

④ It promotes & improves optimum & efficient utilization of resources

⑤ It aims to achieve & fulfill economic obligations of the society.

Q.2 a)

	Rs
Sales	1,00,000
- V.C (40%)	40,000
Contribution	60,000
- f.c	30,000
EBIT	30,000
- Int	10,000
EBT	20,000

$$OL = \frac{C}{EBIT} = \frac{60,000}{30,000} = 2:1$$

$$FL = \frac{EBIT}{EBT} = \frac{30,000}{20,000} = 1.5:1$$

$$OL = \frac{C}{EBT} = \frac{60,000}{20,000} = 3:1$$



b) Determination of WACC Using Book Value Weight

Types of Capital	Book Value	Weight	Cost	WACC
ESC	10,00,000	0.42	14	5.88
P.S	40,00,000	0.16	9	1.44
Debentures	10,00,000	0.42	7	2.94
	24,00,000	1.00		10.26

2) Determination of WACC using Market Value weight

Source	Market Value	Weight	Cost of Capital	WACC
ESC	14,00,000	0.53	14	7.42
PSC	4,50,000	0.17	9	1.53
Deb	8,00,000	0.30	7	2.10
	<u>26,50,000</u>	<u>1.00</u>		<u>11.05</u>

OR

Q.2 a)

Sales (50000 × 10)	Rs 5,00,000
- V.C (50000 × 6)	3,00,000
Contribution	2,00,000
- Fixed Cost	30,000
EBIT	1,70,000
- Interest	7,000
EBT	<u>1,63,000</u>

$$OL = \frac{C}{EBIT} = \frac{200000}{170000} = 1.17\%$$

$$PL = \frac{EBIT}{EBT} = \frac{170000}{163000} = 1.04\%$$

$$CL = \frac{C}{EBT} = \frac{200000}{163000} = 1.23\%$$



b) Determination of WACC Before Tax

Capital	Amount	Weight	Cost of Capital	WACC
ESC	15,00,000	0.33	11	3.63
PSC	10,00,000	0.22	10.5	2.31
Deb	20,00,000	0.45	9	4.05
	<u>45,00,000</u>	<u>1.00</u>		<u>9.99</u>

Determination of WACC After Tax

Capital	Amount	Weight	Cost of Capital	WACC
ESC	15,00,000	0.33	11	3.63
PSC	10,00,000	0.22	10.5	2.31
Deb	20,00,000	0.45	6.75	3.04
				<u>8.98</u>

$$K_d = 1(1-t) = 9(1-0.25) \\ = 9 \times 0.75 = \underline{6.75}$$

Q.3 a) Current Ratio =
 \Rightarrow Ideal Ratio = 2:1
 \Rightarrow This means the company is liquid & is able to meet its current obligations

b) Quick Ratio =
 \Rightarrow Std. Ratio = 1:1
 \Rightarrow It shows short-term liquidity status

c) Inventory Turnover Ratio =
 \Rightarrow Pina ud's inventory is lying idle or over capitalization of stock.
 \Rightarrow The company need to keep proper control over on the inventory
 \Rightarrow Need to frame strategies to speed their stock from the company.

d) Average Collection Period =
 \Rightarrow Company's collection period is very high, so, it is suggested to take initiative to collect its debts speedily & to lower its duration for credit to the supplier

e) Net Profit Ratio =
 \Rightarrow More than industry Std. Ratio
 \Rightarrow Overall profitability is good & assets are efficiently used.



10R

Q.3 Statement of changes in Working Capital

Particulars	31/03/21	31/03/22	↑ in W.C	↓ in W.C
A) Current Assets				
Stock	36500	38000	1500	
Debtors	32100	38000	5900	
Bank	4800	4000		800
Total C. Assets	73400	80000		
less B) Current Liabilities				
Sundry Creditors	43500	48400		4900
Bank overdraft	9800	10900		1100
Total Current liabilities	53300	59300		
Working Capital (CA-L)	20100	20700	7400	6800
Net increase in W.C	(600)			(600)
	20700	20700	7400	7400

Fund Flow Statement (for the year ended 31-03-22)

Sources of funds	Rs	Application of funds	Rs
Issue of E. shares	20000	Purchase of Machinery	28500
Issue of Pref. shares	10000	Purchase of furniture	500
Funds from operation	31400	Increase in W. Capital	600
Issue of Debentures	26000	Purchase of Building	57800
	87400		87400
	=		=

Adjusted Profit and Loss Account.

Particulars	Rs	Particulars	Rs
To Dep on fur	400	By Bal B/d	7500
To Dep on Mach	12800	By Funds from operation	31400
To Tr. to G.R	5000		
To Bal c/d	20700		
	38900		38900
	=		=



Machinery Account		Account	
Particulars	Amt	Particulars	Amt
To Balance B/d	35600	By Depreciation	12800
To Bank Acc (Pur)	28500	By Bal c/d	51300
	<u>64100</u>		<u>64100</u>
	=		=

Furniture Account		Account	
Particulars	Amt	Particulars	Amt
To Bal B/d	2400	By Dep.	400
To Bank (Pur)	500	By Bal c/d	2500
	<u>2900</u>		<u>2900</u>
	=		=

Q.4

Year	C.I	PV @ 12%	PV of C.I	Cumulative C.I
1	700000	0.893	625100	700000
2	1000000	0.797	797000	1700000
3	900000	0.712	640800	2600000
4	800000	0.636	508800	3400000
5	400000	0.567	226800	3800000
			<u>2798500</u>	

① Calculation of Payback Period

$$= \text{No. of Years} + \frac{\text{Amount Required}}{\text{Annual cash inflow}}$$

$$= 3 + \frac{400000}{800000}$$

$$= 3 + 0.5$$

$$= 3.5 \text{ Years}$$



② Calculation of NPV

$$= PV \text{ of CI} - PV \text{ of CO}$$

$$= 27,98,500 - 30,00,000$$

$$= \boxed{-201,500}$$

③ Calculation Profitability Index

$$= \frac{PV \text{ of CI}}{PV \text{ of CO}} = \frac{27,98,500}{30,00,000} = \boxed{0.93}$$

OR

Q.4 a)

Ans: Factors Affecting Working Capital Requirements

- ① Nature of Business
- ② Nature of Demand
- ③ Production policy
- ④ Credit Policy
- ⑤ Dividend Policy
- ⑥ Working Capital Cycle
- ⑦ Manufacturing cycle
- ⑧ Business period
- ⑨ Price level changes
- ⑩ Effects of External Business Environmental factors

Q4 b)

Ans: Importance of Capital Structure Planning

- ① Cost Minimization
- ② Investment opportunity
- ③ Growth of the Country
- ④ Value Maximisation
- ⑤ Increase in Share Price
- ⑥ Patterns of Capital Structure



Q. 5

Statement Showing Working Capital Requirement.

A) Current Assets

1]

Stock

$$a) \text{ RM } \left[31200 \times 36 \times \frac{3}{52} \right] \quad 64800$$

b) WIP

$$\text{RM } \left[31200 \times 36 \times \frac{5}{52} \times 100\% \right] \quad 108000$$

$$\text{DL } \left[31200 \times 20 \times \frac{5}{52} \times 50\% \right] \quad 30000$$

$$\text{OHS } \left[31200 \times 12 \times \frac{5}{52} \times 50\% \right] \quad 8000 \quad 156000$$

$$c) \text{ FG } \left[31200 \times 68 \times \frac{2}{52} \right] \quad 81600$$

$$2) \text{ Debtors } 31200 \times 68 \times \frac{3}{52} \quad 122400$$

$$3) \text{ Cash} \quad 40000$$

$$\text{Total Current Assets} \quad 4,64,800$$

B) Current Liabilities

$$1) \text{ Creditors } \left[31200 \times 36 \times \frac{4}{52} \right] \quad 86400$$

$$2) \text{ O/S Wages } \left[31200 \times 20 \times \frac{2}{52} \right] \quad 24000$$

$$3) \text{ O/S OHS } \left[31200 \times 12 \times \frac{2}{52} \right] \quad 14400$$

$$\text{Total Current Liabilities} \quad 1,24,800$$

$$\text{Net Working Capital (A-B)} \quad 3,40,000$$



W. Note

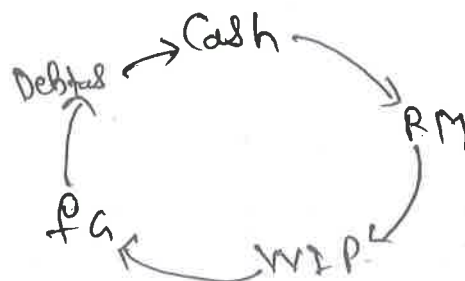
	Per unit
RM	36
DL	20
OHS	12
Total Cost	68
+ Profit	12
Selling Price	80

OR

Q. 5 Answer Any five.

① $\text{EPS} = \frac{\text{Earning Per Share}}{\text{Amount Available to Equity Share Holder}}$
 $= \frac{\text{No. of Equity Shares}}{\text{No. of Equity Shares}}$

② operating cycle -



③ $\text{Gross working Capital} = \text{Total Current Assets}$
 $\text{Net Working Capital} = \text{CA} - \text{CL}$

④ Combined leverage : $\frac{\text{Contribution}}{\text{EBT}}$

⑤ NPV = Net Present Value
= PV of CI \rightarrow NPV of CO

⑥ Trading on Equity \Rightarrow
Use of Debt Component in the Capital employed. A Company is required to create a Capital Structure in such a way which help in increase wealth of equity shareholders.

⑦ Time Value of money
The difference between the Value of money at present' and its Value at a future date' is referred to as the "Time Value of Money".



Total No. of Questions : 5]

P6869

[5860] : 202

M.B.A. - I

SEAT No. :

[Total No. of Pages : 5

202 : GC - 08 : FINANCIAL MANAGEMENT

(2019 Pattern) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Figures in the right indicate full marks.
- 3) Use of electronic calculator is allowed.

Q1) Answer the following Multiple Choice Question (Any 5) [10]

- i) Funds are financial resources in the form of:
 - a) Corporate capital
 - b) Business Funds
 - c) Cash Equivalents
 - d) All of these
- ii) The sum of short term and long term sources of finance is known as :
 - a) Capital structure
 - b) Both of these
 - c) Financial structure
 - d) None of these
- iii) The decisions of investing in long term or fixed assets on the basis of cost-benefit analysis or risk-return analysis are known as:
 - a) Working capital decisions
 - b) Financial Decisions
 - c) Capital budgeting decision
 - d) None of these
- iv) The decisions relating to the use of profit or income of an entity or organization are known.
 - a) Finance decision
 - b) Dividend decisions
 - c) Investment decision
 - d) Any of these
- v) The concept that value of a rupee to be received in future is less than the value of a rupee on hand today is named as what.
 - a) Recovery factor concept
 - b) Time value of money
 - c) Compounding factor concept
 - d) None of these
- vi) The method of converting the amount of cash and cash equivalents value in present is known as:
 - a) Compounding
 - b) Annuity
 - c) Discounting
 - d) None of these



- vii) The decisions which are concerned with allocation of funds to the short term investment proposal are known as:
- Capital investment
 - Working Capital decisions
 - Capital budgeting
 - None of these
- viii) Through leverage analysis the financial manager measure the relationship between.
- Cost and earning
 - Sales revenue and earning
 - Cost and sales revenue
 - Cost sales, revenue and earning

Q2) Write short notes: (Any 2)

[10]

- Financial forecasting.
- Factoring.
- Operating cycle.
- Trading on equity.

Q3) The following is the Balance Sheet of Global India Pvt. Ltd., Ahmednagar as on 31st March 2022.

[10]

Balance Sheet as on 31.03.2022.

Liabilities	Amount	Assets	Amount
Share capital	2,00,000	Land and Building	1,40,000
Profit and loss A/C	30,000	Plant and Machinery	3,50,000
General Reserve	40,000	Stock in Trade	2,00,000
12% Debenture	4,20,000	Debtors	1,00,000
Creditors	1,00,000	Bills Receivable	10,000
Bills payable	50,000	Bank	40,000
Total	8,40,000	Total	8,40,000

Calculate:

- Current Ratio.
- Quick Ratio.
- Inventory to working capital.
- Debt to Equity.
- Proprietary Ratio.

OR

2



The following Balance Sheet of Amrish Ltd. in as follow:

Balance Sheet As on 31.03.2022

Liabilities	Amount	Assets	Amount
Equity capital	1,00,000	Goodwill	5,00,000
6% per share	5,00,000	Plant and Machinery	6,00,000
General Reserve	1,00,000	Land and Building	7,00,000
Profit and loss A/c	4,00,000	Further	1,00,000
provision for tax	1,76,000	Inventory	6,00,000
Bills payable	1,24,000	Bills Receivable	30,000
Bank o/d	20,000	Debtor	1,50,000
Creditors	80,000	Bank	2,00,000
12% Debenture	5,00,000	Short term Investment	20,000
Total	29,00,000	Total	29,00,000

Calculate:

- Current Ratio.
- Liquid Ratio.
- Current Asset to Fix Asset.
- Debt to Equity.
- Proprietary Ratio.

Q4) a) Swaraj Ltd. is considering investing in a project that is expected to cost ₹ 12,00,000 and has an effective life of 5 year. The projected cash inflow for this period is as follows: [5]

Year	Amount (₹)
1	3,00,000
2	3,00,000
3	4,50,000
4	4,50,000
5	7,50,000

Calculate:

- Pay Back Period.
- Net Present value @10% rate of discount.
- Profitability Index.

OR



- a) A firm whom 10% is consider in to mutual exclusive proposal. X & Y. Then details of which are as follow:

Year	Proposal 'X'	Proposal 'Y'
1	1,00,000	6,50,000
2	2,50,000	6,00,000
3	3,50,000	6,00,000
4	5,50,000	5,75,000
5	7,50,000	5,25,000

Calculate IRR of the following proposal X and Y. for an intial investment of ₹15,00,000

- b) Garra v Ltd, has following capital structure.

[5]

Source	Amount ₹
Equity capital (Expected divided 12%)	10,00,000
10% preference share	5,00,000
8% loan	15,00,000

Your required to calculate weighted Average cost of capital (WACC) Assuming that 50% as the rate of income Tax.

- b) Calculate weighted average cost of capital from the following.

Source of Capital	Book value of capital rupee	Specific cost %
Equity share	25,00,000	11
Preference share	18,00,000	13
Bank loan	13,00,000	10

- Q5) The Board of Directors of sarthak limited request you to prepare a statement showing the working capital requirements for a level of activity of 30,000 units of output for the year.

The cost structure for the company's product for the above mentioned activity level is given below.

Particular	Cost per unit (RS)
Raw materials	20
Direct labor	5
Overheads	15
Total	40
Profit	10
Selling Price	50



- Past experience indicates that raw materials are held in stock, on an average for 2 months.
- Work in progress (100% complete in regard to materials and 50% for labour and overhead) will be half a month's production.
- Finished goods are in stock on an average for 1 month.
- Credit allowed to suppliers: 1 month.
- Credit allowed to debtors: 2 month.
- A minimum cash balance of ₹ 25,000 is expected to be maintained.

Prepare a statement of working capital requirements.

[10]

OR

Calculate the working capital requirement of "RJM Ltd.".

Particulars	Cost per unit (Rs)
Raw material	800
Direct labour	300
Over heads	600
Total cost	1700
Profit	300
Selling price	2000

Additional information.

- Output 60,000 units per annum.
- Raw material in stock 1 month.
- W/P - half month (consider 100% Raw material and 50% labour and OH).
- Finish goods in stock 1 month.
- Credit allowed by suppliers - 1 month.
- Credit allowed to debtors 2 month.
- Delay in payment of wages half month.
- Delay in payment of overheads half month.

Assume that production is carried out evenly throughout a year. All the sales are credit sales.

