INTERMEDIATE EXAMINATION

Syllabus 2016

Paper 10: COST & MANAGEMENT ACCOUNTING AND FINANCIAL MANAGEMENT (CMFM)

Time Allowed: 3 Hours **Full Marks: 100**

There are Sections A, B, C and D to be answered subject to instructions given against each.

Section A **You are required to answer all the questions. Each question carries 1 mark.** **Instructions: Each question is followed by 4 Answer choices and only one is correct.** **You are required to select the choice which according to you represents the correct answer.**					**20 X 1 = 20 Marks**
1.	**a.**	Management Accounting relates to _____ .			
		(i)	collection of data from different sources		
		(ii)	modification of data to meet specific needs		
		(iii)	presentation of data		
		(iv)	All the above	A	
	b.	Budgetary Control helps as a basis for _____ .			
		(i)	Statutory Audit		
		(ii)	Internal Audit	A	
		(iii)	Both (i) and (ii)		
		(iv)	None of the above		
	c.	Which of the following is not an example of Functional Budget?			
		(i)	Production budget		
		(ii)	Materials budget		
		(iii)	Cost of production budget		
		(iv)	None of the above.	A	
	d.	A large Margin of Safety indicates _____ .			
		(i)	over-capitalization		
		(ii)	soundness of business		
		(iii)	over-production		
		(iv)	None of the above	A	
	e.	Which one of the following is another name for Learning Curve?			
		(i)	Exponential curve		
		(ii)	Growth curve		
		(iii)	Production curve		
		(iv)	Experience curve	A	

	f.	In a factory, the standard rate per hour is Rs. 4, standard time per unit of output is 20 hours, units produced is 500, actual hours worked is 12,000 hours. What will be the Labour Efficiency Variance?			
		(i)	Rs.6,000 (Favourable)		
		(ii)	Rs.8,000 (Adverse)	A	
		(iii)	Rs.9,600 (Favourable)		
		(iv)	Rs.8,000 (Favourable)		
	g.	What is the name of the variance which is calculated as a difference between hours paid and hours worked?			
		(i)	Labour Rate Variance		
		(ii)	Labour Efficiency Variance		
		(iii)	Idle Time Variance	A	
		(iv)	Net Efficiency Variance		
	h.	The selling price is Rs.20 per unit, variable cost Rs.12 per unit, and fixed cost Rs.16,000, the break-even point in units will be			
		(i)	800 units		
		(ii)	2000 units	A	
		(iii)	3000 units		
		(iv)	850 units		
	i.	All listed companies are required to prepare which of the following?			
		(i)	Fund Flow Statement		
		(ii)	Cash Flow Statement	A	
		(iii)	Both (i) and (ii)		
		(iv)	None of the above		
	j.	ABC Analysis is basically used in _____ .			
		(i)	Inventory Management	A	
		(ii)	Receivable Management		
		(iii)	Payable Management		
		(iv)	Cash Management		
	k.	Which of the following is not a source of funds?			
		(i)	Issue of Shares		
		(ii)	Issue of Debentures		
		(iii)	Decrease in working capital		
		(iv)	Increase in Working Capital	A	
	l.	At indifference level of EBIT, different choices of sources of capital have same _____ .			
		(i)	EBIT		
		(ii)	EPS	A	
		(iii)	PAT		
		(iv)	PBT		

	m.	If EBIT is Rs.1,00,000; Fixed Assets is Rs.2,00,000; Sales is Rs.10,00,000; Variable Cost is Rs.7,00,000. What will be the Operating Leverage?			
		(i)	2		
		(ii)	3	A	
		(iii)	6		
		(iv)	4		
	n.	When there are no opening or closing stocks, if profits under Absorption Costing is Rs. 1,50,000, then Marginal Costing will be show			
		(i)	profits greater than Rs.1,50,000		
		(ii)	losses equal to Rs.1,50,000		
		(iii)	profits equal to Rs.1,50,000	A	
		(iv)	None of the above as it depending on certain factors		
	o.	Which of the following does not help to increase the Current Ratio?			
		(i)	Issue of debentures to buy stock		
		(ii)	Issue of debentures to pay creditors		
		(iii)	Sale of investments to pay off creditors		
		(iv)	Avail bank overdraft to buy a machine	A	
	p.	Shareholders wealth in a firm is reflected by which of the following?			
		(i)	The no. of people employed in the firm		
		(ii)	The book value of the firm's assets less the book value of its liabilities		
		(iii)	Amount of salary paid to its employees		
		(iv)	The market price per share of the firm	A	
	q.	Which of the following is not an assumption of the Capital Asset Pricing Model?			
		(i)	The capital market is efficient		
		(ii)	Investor's decisions are based on a single-time period		
		(iii)	Investors lend or borrow at a risk-free rate of return		
		(iv)	Investors do not have the same expectations about the risk and return	A	
	r.	What does Debt-Equity Ratio help to study about the firm?			
		(i)	Liquidity		
		(ii)	Solvency	A	
		(iii)	Profitability		
		(iv)	Turnover		
	s.	At Break-even Point, which of the following is not correct?			
		(i)	Total Cost is greater than Total Revenue	A	
		(ii)	Total Revenue is equal to Total Variable Cost plus Total Fixed Cost		
		(iii)	There is no profit or loss		
		(iv)	Contribution is equal to Total Fixed Cost		

	t.	Which of the following is correct in relation to Internal Rate of Return of a project?			
		(i)	Initial Cash Flows = Terminal Cash Flows		
		(ii)	Present Value of Cash Inflows = Present Value of Cash Outflows	A	
		(iii)	Profitability Index is greater than 1		
		(iv)	Cash Inflows = Cash Outflows		
Section B **You are required to answer all the questions. Each question carries 2 marks.** **Instructions: Each question is followed by a space where you are required to type your answer.**					**10 X 2 = 20 Marks**
2.	**a.**	Name the basic category of sources of data collection being used in Management Accounting?			
		Type your answer here Internal and External sources			
	b.	A Co. has Annual Fixed Costs of Rs.1,40,000. In 2021, Sales amounted to Rs.6,00,000, as compared with Rs.4,50,000 in 2020, and profit in 2021 was Rs.42,000 higher than that in 2020. At what level of Sales does the company break-even?			
		Type your answer here Rs. 5,00,000 **ROUGH WORK** P/V Ratio= 42000/150000 = 28% BEP = 140000/28% = Rs.500000			
	c.	What is the usual frequency to show the sales details in Sales Budget?			
		Type your answer here Monthly			
	d.	The Proprietors' Fund is Rs.45,00,000 and Ratio of Fixed Assets to Proprietors' Fund is 0.75. What is the Net Working Capital?			
		Type your answer here Rs. 11,25,000 **ROUGH WORK:** Fixed Asset= 45,00,000 X 0.75=Rs.33,75,000 Net WorkingCapital = 45,00,000-33,75,000 =Rs.11,25,000			
	e.	Which variance is used to differentiate between actual and standard cost of material caused by the actual quantity of material used exceeding the standard quantity of material allowed?			
		Type your answer here Quantity Variance			
	f.	The Total Labour Cost of producing 500 units is Rs. 12,500 and that of producing 1,000 units is Rs.20,000. Compute the Learning Curve Ratio.			
		Type your answer here 0.80 **ROUGH WORK** (Average Cost of first 2N units)/ (Average Labour Cost of first N units) = (Rs.20,000/ 1,000 units)/(Rs.12,500/ 500 units) = 0.80			

	g.	Find the present value of Rs. 1,000 receivable 6 years hence given the rate of discount is 10 percent.	
		Type your answer here Rs. 564.5	
	h.	A project requires a cash outlay of Rs.20,000, and generates cash inflows of Rs.8,000, Rs. 7,000, Rs. 4,000 and Rs. 3,000 during the next 4 years. Find out the payback period of the project.	
		Type your answer here 3 years 4 months	
	i.	What is determined by William J Baumol's model of Cash Management where the carrying cost and transaction cost are minimum?	
		Type your answer here optimum cash level	
	j.	X Co. earns Rs.6 per share having capitalization rate of 10 per cent and has a return on investment at the rate of 20 per cent. According to Walter's model, what should be the price per share at 25 per cent dividend payout ratio?	
		Type your answer here Rs.105 **ROUGH WORK** Walter Model is Vc = [D + (Ra/Rc)(E - D)]/ Rc Where: Vc = Market value of the share Ra = Return on Retained earnings Rc = Capitalisation Rate E = Earning per share D = Dividend per share Hence, if Walter model is applied Vc = [(25% of Rs.6) + (0.20/0.10)(Rs.6 – 25% of Rs.6)]/ 0.10	
Section C **You are required to answer any 4 out of 6 questions in this section. Each question carries 12 marks.** **Instructions: Each question is followed by a space where you are required to type your answer.**			**12 X 4 = 48 Marks**
3.	**a.**	An industry specializes in the manufacture of small capacity coolers. The Cost Structure of a coolers is as under: Material Rs. 40 Labour Rs. 100 Variable Overheads 75% of Labour Cost Fixed overheads of the company amounts to Rs. 2.1 lakhs per annum. The sale price of the cooler is Rs. 250 each.	
	(i)	Determine the number of coolers that have to be manufactured and sold in a year in order to break-even.	3
		Type your answer here 6,000 coolers **ROUGH WORK** Marginal Cost Statement	

Particulars	Amount (Rs.)	Amount (Rs.)
Sale Price		250
Less: Variable Cost		
Material	40	

Labour	100	
Variable Overheads	75	(215)
Contribution		35

P/V Ratio = Contribution/Sale Price = 35 / 250 = 14%
B.E. Sales × P/V Ratio = Fixed Cost
B.E. Sales x 35 / 250 = Rs. 2,10,000
Or B.E. Sales = Rs. 15,00,000
B.E.P. = B.E. Sales / Sale Price
= 15,00,000/250 = 6,000 coolers
(OR)
Break Even Sales (in units)= FC/ C p.u.
=2,10,000/35 = 6,000 coolers

	(ii)	How many coolers will have to be made and sold to make a profit of Rs.1,40,000 per year?	3
		Type your answer here 10,000 coolers **ROUGH WORK** Required Contribution = Rs.3,50,000 (Profit + Fixed Cost Rs.2,10,000) If the contribution is Rs.35, then no. of coolers to be made and sold = 1 If the required contribution is Rs.3, 50,000, then no. of coolers to be made and sold = 3, 50,000 ÷35 = 10,000 coolers	
	b.	TR Ltd. has two processes – Preparing and Finishing. The normal output per week is 7,500 units (completed) at a capacity of 75%. TE Ltd. had production problems in preparing and required 2,000 units per week of prepared material for their finishing process. The existing cost structure of one prepared unit of TR Ltd. at the existing capacity is as follows. Material: Rs. 2.00 (variable 100%) Labour: Rs. 2.00 (variable 50%) Overheads: Rs. 4.00 (variable 25%) The sale price of a completed unit of TR Ltd. is Rs. 16 with a profit of Rs. 4 per unit. Contrast the effect on the profits of TR Ltd. for 6 months (25 weeks) of supplying units to TE Ltd. with the following alternative transfer prices per unit. Assume no increase in fixed costs.	
	(i)	Marginal Cost + 25%	2
		Type your answer here Rs.50,000 **ROUGH WORK** Marginal Cost + 25%: Profit = 25% of Rs.4 per unit X 50,000 units = Rs.50,000	
	(ii)	Marginal Cost + 15% Return on Capital Employed (assume Capital Employed Rs.20 lakhs)	2
		Type your answer here Rs.1,50,000 **ROUGH WORK** Marginal Cost + 15% Return on Capital Employed (assume Capital Employed Rs.20 lakhs): 15% of Rs.20 lakhs for 6 months = Rs.3,00,000 X 6/12 = Rs.1,50,000	

	(iii)	At an agreed Market Price of Rs. 8.50.	2
		Type your answer here Rs.2,25,000 **ROUGH WORK** Agreed Market Price of Rs.8.50: (Agreed Market Price – Marginal Cost) per unit X 50,000 units = (Rs.8.50 – Rs.4.00) X 50,000 units = Rs.4.50 X 50,000 units = Rs.2,25,000 Transferred units (25 × 2,000) = 50,000 Marginal Cost Particulars / Amount (Rs.) Material 2.00 Labour 1.00 Overheads 1.00 Marginal Cost 4.00	
4.	**a.**	SV Ltd has furnished you the following data: Budgeted / Actual No. of working days 25 / 27 Production in units 20,000 / 22,000 Fixed overheads (Rs.) 30,000 / 31,000 Budgeted Fixed OH rate is Re.1 per hour. In March 2022 the actual hours worked were 31,500 hours. Calculate the following in relation to Fixed Overheads.	
	(i)	Calculate Efficiency and Capacity Variances.	2
		Type your answer here FOH Efficiency Variance: Rs.1,500 (Favourable) FOH Capacity Variance: Rs.900 (Adverse)	
	(ii)	Calculate Calendar and Volume Variances.	2
		Type your answer here FOH Calendar Variance: Rs.2,400 (Favourable) FOH Volume Variance: Rs.3,000 (Favourable)	
	(iii)	Calculate Expenditure and Total Overhead Variances.	2
		Type your answer here FOH Budget or Expenditure Variance: Rs.1,000 (Adverse) FOH Cost Variance: Rs.2,000 (Favourable)	
	(iv)	Calculate Standard Quantity (SQ) and Revised Budgeted Fixed Overhead.	2
		Type your answer here Standard Quantity (SQ): 21,000 units Revised Budgeted Fixed Overhead: Rs. 32,400 **ROUGH WORK** Computation of Required Values	

SRSH (1) (Rs.)	SRAH (2) (Rs.)	SRRBH (3) (Rs.)	SRBH (4) (Rs.)	ARAH (5) (Rs.)
1 x 33,000	1 x 31,500	1 x 32,400		
33,000	31,500	32,400	30,000	30,000

RBH = 30,000 × 27/25 = 32,400 25

Standard Time per unit = 30,000 hours/ 20,000 units = 1.5 hours

SH = 22,000 x 1.5 = 33,000 hours

SRSQ (1) (Rs.)	SRAQ (2) (Rs.)	SRRBQ (3) (Rs.)	SRBH (4) (Rs.)	ARAH (5) (Rs.)
1 x 33,000	1 x 31,500	1 x 32,400		
33,000	31,500	32,400	30,000	30,000

SRSQ (1) (Rs.)	SRAQ (2) (Rs.)	SRRBQ (3) (Rs.)	SRBQ (4) (Rs.)	ARAQ (5) (Rs.)
1.5 x 22,000	1.5 x 21,000	1.5 x 21,600	1.5 x 20,000	
33,000	31,500	32,400	30,000	30,000

SR = B FOH/ Budgeted Quantity = 30,000/ 20,000 = 1.5 hours

RBQ = 20,000 × 27/25 = 21,600

Units in one hour = 20,000/ 30,000 unit

SQ = 31,500 × 2 3 = 21,000

1. SRSH/ SRAQ Standard Cost of Standard FOH's = Rs. 33,000
2. SRAH/ SRSQ – Standard Cost of Actual FOH's = Rs. 31,500
3. SRRBH/ SRRBQ – Revised Budgeted FOH's = Rs. 32,400
4. SRBH/ SRBQ – Standard Fixed overheads = Rs. 30,000
5. ARAH/ARAQ – Actual Fixed overheads = Rs. 31,000

(i) FOH Efficiency Variance = (1) – (2) = 1,500 (F)

(ii) FOH Capacity Variance = (2) – (3) = 900 (A)

(iii) FOH Calendar Variance = (3) – (4) = 2,400 (F)

(iv) FOH Volume Variance = (1) – (4) = 3,000 (F)

(v) FOH Budget or expensive Variance = (4) – (5) = 1,000 (A)

(vi) FOH Cost Variance = (1) – (5) = 2,000 (F)

b. Discuss the requisites for effective variance reporting. 4

Type your answer here

In order that variance reporting should be effective, it is essential that the following requisites are fulfilled:

1. The variances arising out of each factor should be correctly segregated. If part of a variance due to one factor is wrongly attributed to or merged with that of another, the analysis report submitted to the management would be misleading and wrong conclusions may be drawn from it.
2. Variances, particularly the controllable variances should be reported with promptness as soon as they occur. Mere operation of Standard Costing and reporting of variances is of no avail. The success of a Standard Costing system depends on the extent of responsibility which the management assumes in correcting the conditions which cause variances from standard. In order to assist the management in assuming this responsibility, the variances should be reported frequently and on time. This would enable corrective action being taken for future production while work is in progress and before the project or job is completed.
3. For effective control, the line of organisation should be properly defined and the authority and

responsibility of each individual should be laid down in clear terms. This will avoid 'passing on the buck' and shirking of responsibility and will enable the tracing of the causes of variances to the appropriate levels of management.

4. In certain cases, a particular variance may be the joint responsibility of more than one individual or department. It is obvious that if corrective action has to be effective in such cases, it should be taken jointly.

5. Analysis of uncontrollable variances should be made with the same care as for controllable variances. Though a particular variance may not be controllable at the lower level of management, a detailed analysis of the off-standard situation may reveal far reaching effects on the economy of the concern. This should compel the top management to take corrective action, say, by changing the policy which gave rise to the uncontrollable variance.

5. a. Following estimates of AL Ltd. are available below:-

Advertisement Rs.2,000
Salaries of the Sales Department Rs. 1,500
Expenses of the Sales Department (Fixed) Rs. 1,000
Salesmen's remuneration Rs. 2,500
Salesmen's and Dearness Allowance - Commission @ 1% on sales affected
Carriage outwards: Estimated @ 5% on sales
Agents Commission: 5% on sales
The sales during the period were estimated as follows:
(i) Rs.60,000 including Agent's Sales Rs. 6,000
(ii) Rs.70,000 including Agent's Sales Rs. 8,000
(iii) Rs.90,000 including Agent's Sales Rs.9,500

(i) Calculate total variable sales overhead for the sales level of Rs. 60,000 and Rs. 90,000. 2

Type your answer here
For 60,000 sales level: Rs. 3,840
For 90,000 sales level: Rs. 5,780

(ii) Calculate total selling overhead for the sales level of Rs. 70,000. 2

Type your answer here Rs. 11,520

ROUGH WORK

Selling Overhead Budget of AL LTD.

Sales	60,000	70,000	90,000
A) Fixed Overhead:			
Advertisement	2,000	2,000	2,000
Salaries of Sales Department	1,500	1,500	1,500
Expenses of the Sales Department	1,000	1,000	1,000
Salesman remuneration	2,500	2,500	2,500
Total (A)	7,000	7,000	7,000
B) Variable Overhead:			

		Commission@1%of sales affected	1% of 54000 = 540	1% of 62000 = 620	1% of 80500 = 805
		Carriage outward@ 5% of sales	3,000	3500	4,500
		Agents Commission @5%	5% of 6000 = 300	5% of 8,000 = 400	5% of 9500 = 475
		Total (B)	3,840	4,520	5,780
		Grand Total (A) + (B)	10,840	11,520	12,780
	b.	ABC Co. experiences difficulty in its budgeting process because it finds it necessary to qualify the learning effect as new products are introduced. Substantial product changes occur and result in the need for retraining. An order for 30 units of a new product has been received by ABC Co. So far, 14 have been completed; The first unit required 40 direct labour hours and a total of 240 direct labour has been recorded for the 14 units. The production manager expects an 80% learning effect for this type of work. The company uses standard absorption costing. The direct costs attributed to the centre in which the unit is manufactured and its direct materials costs are as follows:			

Direct Material	30.00 per unit
Direct Wages	6.00 per hour
Variable Overhead	0.50 per direct labour hour
Fixed Overhead	6,000 per four-week operating period

There are ten direct employees working a five-day week, eight hours per day. Personal and other downtime allowances account for 25% of total available time.

	(i)	What is the average time if learning effect is 80% (Learning Co-efficient = - 0.322)?	2
		Type your answer here 17.14 hours **ROUGH WORK** Total time taken to produce 14 units Y = ax^b Y = 40(14)^-0.322 = 17.14 (Average Time)	
	(ii)	Calculate the number of direct labour hours likely to be required for an expected second order of 20 units.	2
		Type your answer here 166.1 hours **ROUGH WORK** Initial order 30 units Y = 40 (30)-0.322 = 13.380 hours (Average time) total order 50 units Y = 40 (50)-0.322 = 11.35 hours (Average time) Total time for 30 units = 13.38 × 30 = 401.4 hours	

Total time for 50 units = 11.35 × 50 = 567.5 hours

Time taken for 20 units from 31 to 50 units (567.5 - 401.4) = 166.1 hours

c. The following information has been made available as on 31st March, 2022: 4

Working Capital	Rs.2,00,000
Reserves & Surplus	Rs. 60,000
Bank Overdraft	Rs.35,000
Proprietary Ratio	0.60
Current Ratio	3.00
Liquid Ratio	2.00

Determine the following:

(i) Total Current Assets

(ii) Total Current Liabilities

(iii) Quick Assets

(iv) Share Capital

Type your answer here

(i) Total Current Assets: Rs.3,00,000

(ii) Total Current Liabilities: Rs.1,00,000

(iii) Quick Assets: Rs.1,30,000

(iv) Share Capital: Rs.4,40,000

ROUGH WORK

Summarized Statement of Assets and Liabilities as on 31st March, 2022

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Share Capital		4,40,000	Fixed Assets		3,00,000
Reserves & Surplus		60,000	Current Assets:		
Current Liabilities:			Stock	1,70,000	
Bank Overdraft	35,000		Quick Assets	1,30,000	
Other C.L.	65,000				3,00,000
		1,00,000			
Total		6,00,000	Total		6,00,000

Working Notes:

Computation of Current Assets and Current Liabilities and Current Liabilities other than Bank Overdraft

Current Ratio = Current Assets (CA)/ Current Liabilities (CL) = 3.00 i.e., 3.0 : 1.0

Working Capital = Rs. 2,00,000

Current Assets / Current Liabilities = 3.0 CA = 3.0 CL

CA – CL = Rs. 2,00,,000

3.0 CL – CL = 2,00,000

2.0 CL = 2,00,000

CL =2,00,000 / 2.0

= Rs. 1,00,000

CA = 3.0 CL

= 3.0× 1,00,000

= Rs. 3,00,000

Bank Overdraft Rs. 35,000

Other CL (balancing figure) Rs. 65,000

CL Rs. 1,00,000

Computation of Current Assets, Quick Assets and Stock

Liquid Ratio = Quick Assets/CL (Excluding Bank Overdraft)

= 2.00 i.e., 2.00 :1.00

CL (Excluding Bank Overdraft) = Rs. 1,00,000 – Rs. 35,000 = Rs. 65,000

Quick Assets = Rs. 65,000 X 2.0 / 1.0 = Rs. 1,30,000

Stock = CA - Quick Assets

= Rs. 3,00,000 – Rs. 1,30.000 = Rs. 1,70,000

Computation of Share Capital:

Proprietary Ratio = (Fixed Assets/ Proprietary Funds) = 0.60

i.e., Working Capital / Proprietary Funds = 0.40

Proprietary Funds = (1/0.40) × Working Capital of Rs.2,00,000 = Rs. 5,00,000

Share Capital = Proprietary Funds - Reserves & Surplus

= Rs. 5,00,000 - Rs. 60,000 = Rs. 4,40,000

6. a. Consider the following information of K Ltd:

Rs. In lakhs

EBIT	1,120
EBT	320
Fixed Cost	700

(i) Calculate the degree of operating leverage and the degree of financial leverage. 3

Type your answer here

Degree of Operating Leverage: 1.625

Degree of Financial Leverage: 3.5

ROUGH WORK:

(i) Degree of Operating Leverage = Contribution/EBIT=[EBIT+ Fixed Cost]/EBIT

=[1120+700]/1120= 1.625

(ii) Degree of Financial Leverage = EBIT/EBT

=1120/320=3.5

(ii) What will be the percentage change in earnings per share if sales increased by 5%? 3

Type your answer here

Percentage Changes in EPS=5 x 5.6875= 28.4375

ROUGH WORK:

Degree of Combined Leverage = Degree of Operating Leverage x Degree of Financial Leverage =1.625*3.5 =5.6875

Degree of Combined Leverage= % Changes in EPS/% Changes in Sales

5.6875= % Changes in EPS/5

% Changes in EPS=5 x 5.6875= 28.4375

b. Following are the data on a capital project being evaluated by the management of PKJ Ltd.: 4

Particulars	Project M
Annual Cost Saving (Rs.)	40,000
Useful life (in years)	4
I.R.R (%)	15
Profitability Index (PI)	1.064
NPV (Rs.)	?
Cost of Project (Rs.)	?
Cost of Capital (%)	?
Pay Back Period (in years)	?
Salvage Value (Rs.)	NIL

Find the missing values using appropriate discount factors from the table below:

	Discount Factors			
Year	15%	14%	13%	12%
1	0.869	0.877	0.885	0.893
2	0.756	0.769	0.783	0.797
3	0.658	0.675	0.693	0.712
4	0.572	0.592	0.613	0.636
5	2.855	2.913	2.974	3.038

Type answer here

NPV: Rs.7,309

Cost of Project: Rs.1,14,200

Cost of Capital: 12%

Pay Back Period: 2.855 years

ROUGH WORK

CIAT = 40,000

Life = 4 years

IRR = 15%

PI = 1.064

At 15% IRR

PV of Cash Inflow = Cost of Project

40,000 PVAF 4 years 15% = Cost of Project

		Cost of project = 40,000 x 2.855 = 1,14,200 PI = PV of Cash Inflow /Initial Outflow = 1.064 1.064 = PV of Cash Inflow /1,14,200 PV of Cash Inflow = 1,21,509 Less: Outflow = 1,14,200 NPV = Rs. 7,309 At Cost of Capital, Let r be the Cost of Capital (Ko) PV of Cash Inflow 40,000 PVAF r% 4 years = 1,21,509 PVAF n% 4 years = 1,21,509 / 40,000 = 3.038 r = 12% Payback period = Initial Investment/ Annual Cash flow = 1,14,200 /40,000 = 2.855 years	
	c.	What do you mean by Cash Management?	2
		Type your answer here Cash refers to coins, currency, cheques, drafts and deposits in banks. The broader view of cash includes near cash assets such as marketable securities and time deposits in banks. The reason why these near cash assets are included in cash is that they can readily be converted into cash. Usually, excess cash is invested in marketable securities as it contributes to profitability. Cash is one of the most important components of current assets. Every firm should have adequate cash, neither more nor less. Inadequate cash will lead to production interruptions, while excessive cash remains idle and will impair profitability.	
7.	**a.**	BE Ltd. produces a product with the following revenue cost structure:	6

Particulars	per unit (Rs.)
Raw Material	105
Direct Labour	70
Overheads	35
Total Cost	210
Profit	80
Selling price	290

The following additional information is available:

A. Average raw materials in stock; one month.
B. Average work in process: half-a-month – Raw Materials 100%, Direct labour 50%, Overheads 50% complete
C. Average finished goods in stock: one month
D. Credit allowed by suppliers: one month
E. Credit allowed to debtors: two months
F. Time lag in payment of wages: half-a-month
G. Overheads: one month
H. One fourth of sales are on a cash basis
I. Cash balance is expected to be Rs.1,50,000

Assume uniform production throughout the year.

Wages and overheads accrue uniformly. Debtors are to be taken at cost

Find the values of (i) Current Liability, (ii) Gross Working Capital and (iii) Net Working Capital

Type answer here

(i) Current Liability: Rs.7,29,168

(ii) Gross Working Capital: Rs.24,46,874

(iii) Net Working Capital: Rs.17,17,706

ROUGH WORK

Gross Working Capital:

Stock of Raw Material (50,000 units × 105 × 1/12) = Rs. 4,37,500

Work –in –progress:

Raw Materials (50,000 units × 105 × 1/12 × 1/2) = Rs. 2,18,750

Direct Labour (50,000 units × 70 × 1/12 × 1/2 × 1/2) = Rs. 72,916

Overheads (50,000 units × 35 × 1/12 × 1/2×1/2) = Rs.36,458

Stock of finished goods (50,000 units × 210 × 1/12) = Rs.8,75,000

Debtors (50,000 units × 3/4 × 210 × 1/12) = Rs.6,56,250

Cash Balance = Rs.1,50,000

Total (A) = Rs.24,46,874

Current Liabilities:

Creditors for Raw Material (50,000 units × 105 × 1/12) = Rs.4,37,500

Creditors for Wages (50,000 units × 70 × 1/12 × 1/2) = Rs.1,45,834

Creditors for Overheads (50,000 units × 35 × 1/12) = Rs.1,45,834

Total (B) = Rs.7,29,168

Net Working Capital (A-B) = Rs.17,17,706

b. From the following data find out the Internal Rate of Return (IRR) of a project and comment on its acceptance or rejection if the cut-off rate is 15% and 16% respectively: (6)

Investment = Rs. 1,00,000

Cash Inflows for:

1st year = Rs.30,000

2nd year = Rs.30,000

3rd year = Rs.40,000, and

4th year = Rs.45,000

You are required to use the following discount factors:

Year	Discount Factors at 15%	Discount Factors at 16%
1	0.869	0.862
2	0.756	0.743
3	0.658	0.641
4	0.572	0.552

Type answer here

IRR: 15.37%

Comments:

Cut-off rate is 15%: Accept the project as the IRR is greater than the cut-off rate.
Cut-off rate is 16%: Reject the project as the IRR is lesser than the cut-off rate.

ROUGH WORK

Computation of Adjusted Cash Flows

Year	Discount Factors		Cash Inflows	Adjusted CF (15%)	Adjusted CF (16%)
	15%	16%			
1	0.869	0.862	30,000	26,070	2,5860
2	0.756	0.743	30,000	22,680	22,290
3	0.658	0.641	40,000	26,320	25,640
4	0.572	0.552	45,000	25,740	24,840
				1,00,810	98,630

Discount Factor (%)	Total Adjusted CF (Rs.)
15	1,00,810
r	1,00,000
16	98,630

(r – 16)/(15 – 16) = (1,00,000 – 1,00,810)/(98,630 – 1,00,810)
or, r – 16 = (-1)(-1,370)/(-2,180) = -0.62844
or, r = 16 – 0.62844 = 15.37156 = 15.37 (approx.)

8. **You are required write Short Notes on any 4 out of 5.** **4 X 3 = 12 Marks**

a. Limitations of Learning Curve — 3

Type answer here

The following points limiting the usefulness of learning curves should be noted:-

1. The learning curve is useful only for new operations where machines do not constitute a major part of the production process. It is not applicable to all productions. E.g. new and experienced workmen.
2. The learning curve assumes that the production will continue without any major interruptions. If for any reason the work in interrupted, the curve may be deflected or assume a new slopes
3. Charges other than learning may affect the learning curve. For example, improvement in facilities, arrangements, and equipment as well as personnel morale and performance may be factors influencing the curve. On the other hand, negative developments in employee attitudes may also affect the curve and reverse or retard the progress of improvement.
4. The characteristic 80 percent learning curve as originally obtaining in the air force industry in U.S.A has been usually accepted as the percentage applicable to all industries. Studies show that there cannot be a unique percentage which can be universally applied.

b. Cost Accounting vs Management Accounting — 3

Type your answer here

Cost Accounting	Management Accounting

		An object of cost accounting to find out cost of a product or a service	An object of management accounting is to make available various information to the management for planning and other activities
		In cost accounting both past and present data are used.	In the normally data are used for future policies and planning.
		Cost accounting having a narrow scope because mainly it determines the cost	Its scope is very wide, it includes financial account, cost account report to management etc.
		Cost Accounting is an old method	Management accounting is a modern concept
		In case of cost accounting, some principles and methods are adopted and from time to time same principles are used	In case of management accounting, for reporting to management no specific rule or principle is adopted
	c.	Zero Working Capital Strategy	3
		Type your answer here Zero working capital is a situation in which there is no excess of current assets over current liabilities to be funded. The concept is used to drive down the level of investment required to operate a business, which can also increase the return on investment for shareholdeRs. Management prefers low levels of working capital since working capital earns an extremely low rate of return. Some companies are now driving working capital to record low levels, so called zero working capital. There are two requirements to implement zero working capital i.e (a) Demand based production where demand based organizations do everything only as they are demanded: fill customer orders, receive supplies, manufacture products and other functions are done only as needed. (b) Receivable and payable terms under which credit is granted to customers must be curtailed, while payment terms to suppliers must be extended. Ideally, cash should be received from customers before it is due for payment to supplier This essentially means that customer payments are directly funding the payments to supplier zero working capital would call for a fine balancing act in Financial Management, and the success in this endeavour would get reflected in healthier bottom lines.	
	d.	Significance of Capital Budgeting	3
		Type your answer here Capital Budgeting decisions are considered important for a variety of reasons. Some of them are the following: 1. Crucial decisions: Capital budgeting decisions are crucial, affecting all the departments of the firm. So the capital budgeting decisions should be taken very carefully. 2. Long-run decisions: The implications of capital budgeting decisions extend to a longer period in the future. The consequences of a wrong decision will be disastrous for the survival of the firm. 3. Large amount of funds: Capital budgeting decisions involve spending large amount of	

funds. As such proper care should be exercised to see that these funds are invested in productive purchases.

Rigid: Capital budgeting decision cannot be altered easily to suit the purpose. Because of this reason, when once funds are committed in a project, they are to be continued till the end, loss or profit no matter.

e. Scope of Financial Management — 3

Type your answer here

Financial Management today covers the entire gamut of activities and functions given below. The head of finance is considered to be importantally of the CEO in most organizations and performs a strategic role. His responsibilities include:-

(i) Estimating the total requirements of funds for a given period;

(ii) Raising funds through various sources, both national and international, keeping in mind the cost effectiveness;

(iii) Investing the funds in both long term as well as short term capital needs; (iv) Funding day-to-day working capital requirements of business;

(iv) Collecting on time from debtors and paying to creditors on time;

(v) Managing funds and treasury operations;

Section D — **12 Marks**

You are required to answer all the questions in this section.

Instructions: Each question is followed by a space where you are required to type your answer.

9. An Indo-US Company engaged in manufacturing and supplying goods in the Indian home market. At present it has a domestic demand of 2,000 units as a result of which it restricts its production to meet its domestic demand only.

There lies a spare capacity of 3,000 units and surplus production capacity, may be utilized to meet export orders. The management of the company took such a decision when they found an interested foreign buyer for its products.

The cost structure for the current production and sale of 2,000 units for home market has been provided as below:

Particulars	Rs.
Materials	40,000
Wages	36,000
Factory Overheads:	
Fixed	12,000
Variable	20,000
Administration Overheads (Fixed)	18,000
Selling Overheads (Fixed)	
Fixed	10,000
Variable	16,000
	1,52,000

The current selling price for the home market is Rs. 80 per unit.

a. What will be the profit/loss on present production and sale of 2,000 units for the home market.? — 4

Type your answer here

Profit on present production and sale of 2,000 units for the home market: Rs.8,000

ROUGH WORK

Calculation of Present Profitability

Particulars	Rs.	Rs.
Sales (2,000 Articles @ Rs. 80 per article)		1,60,000
Less: Marginal Cost:		
Materials	40,000	
Wages	36,000	
Variable Overheads:		
Factory	20,000	
Selling and Distribution	16,000	
		1,12,000
Contribution		48,000
Less: Fixed Overheads		
Factory	12,000	
Office	18,000	
Selling & Distribution	10,000	
		40,000
Profit		8,000

b. A foreign buyer is interested to place an order for the supply of 3,000 units. The management is to decide on the following:
(i) Whether the export order should be accepted or not based on current idle capacity?
(ii) What is the minimum price to negotiate with the foreign buyer so that the current total profit/loss is unaffected?
As a consultant, help the management to arrive at a decision. — 2

Type your answer here

(i) The maximum capacity of production is 5,000 units and currently only 2,000 units are produced. Thus, the export order in consideration is of 3,000 units which can be easily manufactured. Thus, the export order may be accepted.

(ii) At the existing capacity of manufacturing and selling 2,000 units, all fixed costs are recovered and a total profit of Rs.8,000 is achieved.

Since, there is no additional fixed costs to cover, the variable costs for producing and selling additional 3,000 units are need to be recovered. Thus, the minimum export price for the 3,000 units would be the marginal cost which may be computed as below:

Marginal Cost of producing and selling 2,000 units = Rs.1,12,000

Minimum export price per unit = Marginal Cost per unit = Rs.1,12,000/2,000 units = Rs.56 per unit

10. XYZ Co. currently manufactures its products on a manual machine that is not fully depreciated for tax purposes and has a book value of Rs.75,000 as on 31.03.2022. It was purchased for Rs.2,15,000 on 01.04.2002. The cost of the product are as follows:

Particulars	Unit Cost (Rs.)
Direct Wages	25.00

Indirect Wages	17.00
Other Variable Overheads	10.50
Fixed Overheads	17.50
	70.00

In the past year 10,000 units were produced. It is expected that with suitable repairs the old manual machine can be used indefinitely in future. The repairs are expected to average Rs. 75,000 per year. An equipment manufacturer has offered to accept the old manual machine as a trade in for a new super automatic machine. The new machine would cost Rs.4,25,000 before allowing for Rs.1,10,000 for the old manual machine. The Project costs associated with the new super automatic machine are as follows:

Particulars	Unit Cost (Rs.)
Direct Wages	15.00
Indirect Wages	20.00
Other Variable Overheads	7.00
Fixed Overheads	22.75
	64.75

The fixed overhead costs are allocations for other departments plus the depreciation of the machine. The old manual machine can be sold now for Rs.50,000 in the open market. The new super automatic machine has an expected life of 10 years and salvage value of Rs.25,000 after its useful life. The current income tax rate applicable for XYZ Co. is 50%. For tax purposes cost of the new super automatic machine and the book value of the old manual machine may be depreciated in 10 years. The minimum required rate is 10%. It is expected that the future demand of the product will stay at 10,000 units per year.

The present value of an annuity of Re. 1 for 9 years @ 10% discount factor = 5.759. The present value of Rs.1 received at the end of 10th year @10% discount factor is = 0.386.

a. What will be the Annual Incremental Cash Flow after Tax for Year 1 to Year 9? 3

Type your answer here Rs.1,06,500

ROUGH WORK

Particulars	Old Manual Machine	Super Automatic Machine	Incremental Cost
No. of units (units)	10,000	10,000	
Variable Cost per unit (Rs./unit)	52.5	42	
Variable Cost (Rs.)	5,25,000	4,20,000	1, 05,000
Repairs	75,000	NIL	75,000
Depreciation:			
(2,15,000 – 75,000)/20	7,000		
(4,25,000 – 25,000)/10		40,000	
			(33,000)
Total Saving Before Tax			1,47,000
Less: Tax at 50%			73,500
Savings after Tax			73,500
Add: Depreciation			33,000
CIAT			1,06,500

b. Determine the amount of Net Investment which is required to be made in event of replacing the old manual machine with the new super automatic machine.
Decide on whether to replace the old manual machine with the super automatic machine on the basis of NPV method. — 3

Type your answer here

Net Investment: Rs.3,32,500

Decision: Replace old manual machine with the super automatic machine as the Net Present Value is positive.

ROUGH WORK

Particulars	Amount (Rs.)
Cost of New Super Automatic Machine	4,25,000
Less: Exchange price for Old Manual Machine	1,10,000
	3,15,000
Add: Tax on profit on exchange [1,10,000 – 75,000] x 50%	17,500
Net Investment	3,32,500

Particulars	Details	Amount (Rs.)
P.V. of Operating Cash Inflows from Year 1 to Year 9	1,06,500 X 5.759	6,13,334
P.V. of Cash Inflow for Year 10	(1,06,500 + 25,000) X 0.386	50,759
P.V. of Total Cash Inflow		6,64,093
Less: Cash Outflow		3,32,500
Net Present Value		3,31,593

END