Paper 8- Cost Accounting & Financial Management

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Full Marks:100 **Time allowed: 3 hours**

Section A : Answer Question No. 1 which is compulsory Carries 25 Marks

1. Answer the following questions

(A) Each Question carries 2 Marks

(i) Quarterly (3 months) requirement 6250 units
Annual requirement = 4 × 6,250 = 25,000 units
Cost per unit = ₹2.40
Carrying cost = 15%
Carrying cost per unit = 2.4 × 15% = ₹0.36
Ordering cost per order = ₹45

$$EOQ = \sqrt{\frac{2 \times \text{Annual requirement} \times \text{ordering cost}}{\text{Carrying cost}}}$$

$$= \sqrt{\frac{2 \times 25,000 \times 45}{0.36}}$$

= 2500 units

(ii)

	Amount (₹)
Overhead incurred	1,57,500
OH Absorbed (35,000 hour × ₹3)	1,05,000
Under recovery	52,500

(iii) Earnings under Rowan

$$= T \times R + \left[\frac{S - T}{S}\right] T \times R$$

Actual Hours (T) = 35 hours Rate per hours (R) = 36
Standard Hours (S) = 40

$$\text{Earnings} = 35 \times 36 + \left[\frac{40 - 35}{40}\right] (35 \times 36)$$

= 1260 + 157.5 = 1417.50

(iv) Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}}$

Sales	40,00,000
(-)Variable cost	25,00,000
Contribution	15,00,000
(-) Fixed costs	6,00,000
EBIT	9,00,000

Operating Leverage = $\frac{15,00,000}{9,00,000}$
= 1.6666 = 1.67

(v) Sales = 12,00,000
Op. Stock = 3,00,000
Cl. Stock = 1,80,000

$$\text{Average Stock} = \frac{3,00,000 + 1,80,000}{2} = ₹2,40,000$$

$$\text{Inventory Turnover Ratio} = \frac{\text{Sales / COGS}}{\text{Average stock}}$$

$$= \frac{₹12,00,000}{₹2,40,000} = 5 \text{ times}.$$

(B) State whether the following statements are True or False

(i) False

(ii) True

(iii) False

(iv) True

(v) False

(c) Fill in the Blanks

(i) Productivity

(ii) Store keeper or Stores personnel

(iii) Overheads

(iv) Earnings per share

(v) Current Assets and current liability

(D) Match the Following

(i) Relevant Cost	(E) Costs affected by Decision Making
(ii) FSN Analysis	(D) Inventory Classification & Control
(iii) Net Income Approach	(A) Capital Structure
(iv) Separation Method	(C) Labour Turnover
(V) Benefit Cost Ratio	(B) Capital Budgeting

Sec-B

Answer any three Question from Q. No 2,3,4 and 5. Each Question carries 15 Marks

2. (A) statement showing computation of material cost of purchases and value of closing stock

Particulars	Mat – A	Mat – B	Mat – C	Mat – D
Basic cost of material in $	1,000 × 1.5$ = 1,500$	2,000 × 1.25 = 2,500$	1,500 ×2 = 3,000$	3,000 × 1 = 3,000$
Insurance & import Duty (23% + 2%) = 25%	375$	625$	750%	750$
Cost in $	1,875$	3,125$	3,750$	3,750$
Cost in INR	1,20,000	2,00,000	2,40,000	2,40,000
Freights clearing charges apportioned on weight basis (1: 2: 1.5: 3) (30,000)	4,000	8,000	6,000	12,000

Total cost of purchase	1,24,000	2,08,000	2,46,000	2,52,000
Issued to production	62,000	1,04,000	1,23,000	1,26,000
Value of closing before storage	62,000	1,04,000	1,23,000	1,26,000
- Storage loss (5%)	3,100	5,200	6,150	6,300
Closing Stock	58,900	98,800	1,16,850	1,19,700

(B)

Bin Card	Stores Ledger
a) It is maintained by the store keeper.	a) It is maintained by the Costing department.
b) It contains only quantitative details of materials received, issued and returned to stores.	b) It contains information both in quantity and value.
c) Entries are made when transactions take place.	c) It is always posted after the transaction.
d) Each transaction is individually posted.	d) Transactions may be summarized and then posted.
e) Inter-department transfers do not appear in Bin-card.	e) Material transfers from one job to another job are recorded for costing purpose.

3. (A) Standard production in actual time = 480 × 200 = 96,000
Excess of actual production over standard = 1,19,600 - 96,000 = 23,600.
% of excess over standard = (23,600 / 96,000) × 100 = 24.58%
% of bonus = ½ × 24.58 = 12.29%
Bonus rate per hour = 3.2 × 12.29% = 0.393
Total bonus for week = 480 × 0.393 = ₹188.64

Computation of Total Earnings of Jones & Smith:

Particulars		Jones		Smith
Basic wages	41.5×2	83.00	44.5 × 2.5	111.25
Bonus	41.5 × 0.393	16.31	44.5 × 0.393	17.49
Total Earnings		**99.31**		**128.74**

(B) **Treatment of Idle Time**

As per CAS-7, Idle Time Cost shall be assigned direct to the cost object or treated as overheads depending on the economic feasibility and specific circumstances causing such idle time.

Treatment of different categories of Idle Time is as below:-

(a) Unavoidable idle time above would be for insignificant periods. In Cost Accounts, this is allowed to remain merged in the Production Order or Standing Order Number on which the worker was otherwise employed.

(b) Normal Idle Time is booked to factory or works overhead. For the purpose of effective control, each type of idle time, i.e., idle time classified according to the causes is allocated to a separate Standing Order Number.

(c) Abnormal Idle Time would usually be heavy in amount involves longer periods and would mostly be beyond the control of the management. Payment for such idle time is not included in cost and is adjusted through the Costing Profit and Loss Account or included in Profit and Loss Account, when the accounts are integrated.

(d) Tendency to conceal Idle Time should be discouraged. It is a non-effective time

and the resultant loss of profit due to reduced production activity but also increases the cost per unit of production as the fixed costs continue to be incurred, irrespective of the reduced quantum of production due to loss of labour time. Idle Time should, therefore, be highlighted prominently so that action can be taken to remove the causes thereof. Although for obvious reasons, it is not possible to record minor details, vigilance is necessary for finding out long-term idleness among the workers.

4. (A) Computation of machine hour rate when machine is in operation

Particulars			Amount
Standing Charges:			
Rent	50,000 x 3/80	= 1875	
Heating & Lighting	40,000 x 3/80	= 1500	
Supervision	1,50,000x1/25	= 6000	
Reserve equipment		= 5000	
		= 14375	
Cost per hour	14375/4000		3.59
Machine Expenses:			
Depreciation	[50,000 ÷(10 × 3600)]	=1.39	3.39
Wages	[24/8 x 1/2]	= 1.50	
Power		= 0.50	
Machine Hour Rate			6.98

Computation of machine hour rate when machine is under setup

Particulars			Amount
Standing Charges:			
Rent	50,000 × 3/80	= 1,875	
Heating & Lighting	40,000 × 3/80	= 1,500	
Supervision	1,50,000 × 1/25	= 6,000	
Reserve equipment		= 5,000	
		= 14,375	
Cost per hour		14,375/4,000	3.59
Machine Expenses:			
Depreciation	[50,000 ÷ (10 × 3600)]	= 1.39	4.39
Wages	[24/8]	= 3.00	
Power		= —	
Machine Hour Rate			**7.98**

Computation of cost of the jobs

Particulars	Job 1102	Job 1308
Setup cost		
Job 1102:80 × 7.98	638.40	
Job 1308:40 × 7.98		319.20
Operation Cost		
Job 1102: 130 × 6.98	907.40	
Job 1308: 160 × 6.98		1,116.80
Total Cost of the Job	**1,545.80**	**1,436.00**

(B) Absorption means "recording of overheads in cost accounts on an estimated basis, with the help of a predetermined overhead rate, which is computed at normal or average or maximum capacity". In general the formula for overhead absorption rate is given as

$$\text{Overhead rate} = \frac{\text{Amount of overhead}}{\text{No of units of the base}}$$

Various methods of absorption of overheads

(a) Blanket or single overhead rate

(b) Multiple rates (for each department from each cost center for each product line)

(c) Production unit method

(d) Percentage of direct wages

(e) Percentage of direct material cost

(f) Percentage of prime cost

(g) Direct labour Hours

(h) Machine hours

5. (A) **Cost sheet for the period** ₹

Particulars	50% capacity utilization - 35000 units, seven months 1st Jan to 31st July, 2012	100% capacity utilization - 50000 units. Five months 1st Aug to 31st Dec, 2012
Raw Materials	7,00,000	10,00,000
Direct Labour	4,20,000	6,00,000
Direct Expenses	70,000	1,00,000
Variable overheads	5,60,000	8,00,000
Fixed Overheads	1,75,000	1,25,000
Semi-Variable Overheads	52,500	62,500
Total Costs	19,77,500	26,87,500
Profit	4,37,500	3,62,500
Sales	24,15,000	30,50,000
Selling Price Per Unit	69.00	61.00
Cost Per Unit	56.50	53.75

(B) **Cost Control vs. Cost Reduction:** Both Cost Reduction and Cost Control are efficient tools of management but their concepts and procedure are widely different. The differences are summarised below:

Cost Control	Cost Reduction
(a) Cost Control represents efforts made towards achieving target or goal.	(a) Cost Reduction represents the achievement in reduction of cost.
(b) The process of Cost Control is to set up a target, ascertain the actual performance and compare it with the target, investigate the variances, and take remedial measures.	(b) Cost Reduction is not concern with maintenance of performance according to standard.
(c) Cost Control assumes the existence of standards or norms which are not challenged.	(c) Cost Reduction assumes the existence of concealed potential savings in standards or norms which are therefore subjected to a constant challenge with a view to improvement by bringing out savings.
(d) Cost Control is a preventive function. Costs are optimized before they are incurred.	(d) Cost Reduction is a corrective function. It operates even when an efficient cost control system exists. There is room for reduction in the achieved costs under controlled conditions.

(e) Cost Control lacks dynamic approach.	(e) Cost Reduction is a continuous process of analysis by various methods of all the factors affecting costs, efforts and functions in an organization. The main stress is upon the why of a thing and the aim is to have continual economy in costs.

Sec- C

Answer any two Questions from Q. No 6, 7 and 8. Each Question carries 15 Marks

6 (A) Cash Flow statement as per AS – 3.

Cash Flow Statement
For the year ending 31st March, 2012

	Particulars	(₹)	(₹)
A	**Cash flow from Operating Activities**		
	Profit and Loss A/c as on 31.3.2012		3,00,000
	Less: Profit and Loss A/c as on 31.3.2011		2,10,000
			90,000
	Add: Transfer to General Reserve	25,000	
	Provision for Tax	96,000	
	Proposed Dividend	1,44,000	2,65,000
	Profit before Tax		3,55,000
	Adjustment for Depreciation		
	Land and Building	50,000	
	Plant and Machinery	1,20,000	1,70,000
	Profit on Sale of Investments		(15,000)
	Loss on Sale of Plant and Machinery		9,000
	Goodwill written off		20,000
	Interest on Debenture		33,000
	Operating Profit before Working Capital changes		5,72,000
	Adjustment for Working Capital changes:		
	Decrease in Prepaid Expenses		4,000
	Decrease in Stock		15,000
	Increase in Debtors		(1,27,000)
	Increase in Creditors		30,000
	Cash generated from Operations		4,94,000
	Income tax paid		(71,000)
	Net Cash Inflow from Operating Activities (a)		**4,23,000**
B	**Cash flow from Investing Activities**		
	Sale of Investment		35,000
	Sale of Plant and Machinery		36,000
	Purchase of Plant and Machinery		(2,25,000)
	Net Cash Outflow from Investing Activities (b)		**(1,54,000)**
C	**Cash flow from Financing Activities**		
	Issue of Preference Shares		1,00,000
	Premium received on issue of securities		25,000
	Redemption of Debentures at a premium		(2,20,000)
	Dividend paid		(1,36,000)
	Interest paid to Debenture holders		(33,000)
	Net Cash outflow from Financing Activities (c)		**(2,64,000)**

	Net increase in Cash and Cash Equivalents during the year (a+b+c)		5,000
	Cash and Cash Equivalents at the beginning of the year		88,000
	Cash and Cash Equivalents at the end of the year.		93,000

Working Notes:

Dr. **Provision for the Tax Account** Cr.

Particulars	Amount (₹)	Particulars	Amount (₹)
To Bank (paid)	71,000	By Balance b/d	80,000
To Balance c/d	1,05,000	By Profit and Loss A/c	96,000
	1,76,000		1,76,000

Dr. **Investment Account** Cr,

Particulars	Amount (₹)	Particulars	Amount (₹)
To Balance b/d	2,40,000	By balance (bal fig)	35,000
To profit and loss (profit on sale)	15,000	By balance c/d	2,20,000
	2,55,000		2,55,000

Dr. **Plant and Machinery Account** Cr.

Particulars	Amount (₹)	Particulars	Amount (₹)
To Balance b/d	6,00,000	By Bank (sale)	36,000
To Bank A/c (Purchase)	2,25,000	By Profit and Loss A/c (loss on sale)	9,000
		By Depreciation	1,20,000
		By Balance c/d	6,60,000
	8,25,000		8,25,000

Note:
In this question, the date of redemption of debentures is not mentioned. So, it is assumed that the debentures are redeemed at the beginning of the year.

(B) **Limitations of Ratio Analysis**:

(i) It is always a challenging job to find an adequate standard. The conclusions drawn from the ratios can be no better than the standards against which they are compared.

(ii) It is difficult to evaluate the differences in the factors that affect the company's performance in a particular year as compared with that of another year and that of another company. The task becomes more difficult when comparison is made of one company with another when they are of substantially different size, age and diversified products.

(iii) While making comparisons of ratios, due allowance should be made for changes in price level. A change in price level can seriously affect the validity of comparisons of ratios computed for different time periods and particularly in case of ratios whose numerator and denominator are expressed in different units of currency.

(iv) Comparisons are also become difficult due to differences in definition. The terms like gross profit, operating profit, net profit etc. have not got precise definitions and there is considerable diversity in practice as to how they should be measured.

(v) A Balance Sheet may fail to reflect the average or typical situation, as it is prepared as of one moment of time. It ignores short-term fluctuations in assets and equities that may occur within the period covered by the two Balance Sheet dates.

(vi) Various differences are found among the accounting methods used by different companies which variously affect the comparability of financial statements. Methods of recording and valuing assets, write-offs, costs, expenses etc differ from company to company.

(vii) As ratios are simple to calculate and easy to understand, there is a tendency to over-employ them. While such statistical approach stimulates thinking, it is also likely to lead to the accumulation of a mass of data; if due care is not taken, that might obscure rather than clarify relationships.

7 (A) Computations of working capital Requirements

	Amount in (INR)
Current Assets	
Raw materials (1,56,000 × 90 × $\frac{4}{52}$) =	10,80,000
Working Progress material 1,56,000 × 90 × $\frac{2}{52}$ = 5,40,000 W/P – Labour (1,56,000 × 40 × $\frac{2}{52}$ × 50%) = 1,20,000 W/P – over head (1,56,000 × 75 × $\frac{2}{52}$ × 50%) = 2,25,000	8,85,000
Finished Goods (1,56,000 × 205 × $\frac{4}{52}$)	24,60,000
Debtors (1,56,000 × 205 × $\frac{8}{52}$ × 80%)	39,36,000
Cash in hand	60,000
Current Assets	84,21,000
Current Liabilities	
Creditor (1,56,000 × 90 × $\frac{4}{52}$)	10,80,000
Wages outstanding (1,56,000 × 40 × $\frac{1.5}{52}$)	1,80,000
Overhands outstanding (1,56,000 × 75 × $\frac{4}{52}$)	9,00,000
Current Liability	21,60,000
Working capital (CA – CL)	62,61,000

(B) Calculate the Cost of Capital from the following cases:

(i) $$K_p = \frac{\text{Preference dividend (1+ dividend)} + \frac{RV - NS}{N}}{\frac{RV + NS}{2}} \times 100$$

$$K_p = \frac{14(1+0.1) + \frac{105-95}{10}}{\frac{105+95}{2}} \times 100$$

$$K_p = \frac{15.4+1}{100} = 16.4\%$$

(ii) K_e (no growth model) = $\frac{\text{Dividend}}{\text{Net Sale Proceeds}} \times 100$

$$K_e = \frac{6}{50} \times 100 = 12\%$$

8. (A) Working Notes:

Year	Profit before tax	Profit after tax @50%	Cash inflows after tax [PAT + Dep]	Cumulative Cash inflows	Disc. factor @ 10%	Present Value
1	1,00,000	50,000	90,000	90,000	0.9091	81,819
2	1,00,000	50,000	90,000	1,80,000	0.8264	74,376
3	80,000	40,000	80,000	2,60,000	0.7513	60,104
4	80,000	40,000	80,000	3,40,000	0.6830	54,640
5	40,000	20,000	60,000	4,00,000	0.6209	37,254
						3,08,193

(i) **Pay Back Method:**
Pay back period = 2 + 20,000/80,000
= 2.25 years (or) 2 years 3 months

(ii) **Rate of Return on Original Investment Method**.
ARR = Average Profit after Tax / Investment × 100
= 40,000 / 2,00,000 × 100 = 20%

(iii) **Rate of Return on Average Investment Method**
ARR = Average Profit after tax / Average investment × 100
= 40,000 / [2,00.000 + 0/2] × 100
= 40%

(iv) **Discounted Cash Flow Method taking Cost of Capital as 10%**

Present value of cash inflows after tax	3,08,193
Less: Outflow	2,00,000
Net Present Value	1,08,193

(B) Operating Leverage: - Operating leverage reflects the impact of change in sales on the level of operating profits of the firm.
Other things remaining constant, higher the operating leverage, higher will be the change in EBIT for a change in number of units sold/volume.
Degree of operating Leverage is high where fixed costs are high. There will unique operating leverage for each level of output.
Degree of operating leverage = $\frac{\text{Contribution}}{\text{EBIT}}$

Financial Leverage: - Financial Leverage may be defined as a percentage change in EPS associated with a given percentage change in the level of EBIT. Financial Leverage emerges as a result of fixed financial charge against the operating profit of the firm.

Other things remain constant, higher the Financial leverage, higher will be change in EPS for change in EBIT.

Higher the interest burden, higher will be the financial leverage.

Financial leverage = $\frac{EBIT}{EBT}$