Paper- 15: MANAGEMENT ACCOUNTING- ENTERPRISE PERFORMANCE MANAGEMENT

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

The figures in the margin on the right side indicate full marks.
Attempt Question No. 1 (carrying 25 marks), which is compulsory and
Any five more questions (each carrying 15 marks) from the rest.

1.

a) State whether the following statement are "True" or "False". [5]

i) A company's approach to make or buy decision depends on whether the company is operating at or below normal volumes.

ii) Life Cycle Costing is a technique to establish the total cost of ownership.

iii) Drum is the constraint and therefore sets the pace for the entire system.

iv) Theory Y style of Management is a highly autocratic style.

v) EVA encourages short-term performance.

b) Choose the most appropriate one from the stated options and write it down. [5×2=10]

i) ABC Ltd., has current PBIT of ₹ 19.20 Cr. on total assets of ₹ 96 Cr. The company proposes to increase assets by ₹ 24 Cr., which is estimated to increase operating profit before Depreciation by ₹ 8.4 Cr. and a net increase in depreciation by ₹ 4.8 Cr. This will result in ROI:

A. To decrease by 1%
B. To increase by 1%
C. To remain the same
D. None of these.

ii) A particular job requires 800 kgs of material-P 500 kgs of the particular material is currently in stock. The original price of the material-P was ₹ 300 but current resale value of the same has been determined as ₹ 200. If the current replacement price of the material-P is ₹ 0.80 per kg., the relevant cost of the material-P required for the job would be :

A. ₹ 640
B. ₹ 440
C. ₹ 300
D. None of these.

iii) In two consecutive periods, sales and profits were ₹1,60,000 and ₹8,000 respectively in the first period and ₹ 1,80,000 and ₹14,000 respectively during the second period. If there is no change in fixed cost between the two periods, then what would be profit if sales are ₹ 2,00,000?

A. ₹16,000
B. ₹18,000
C. ₹ 20,000
D. ₹ 22,000

iv) A company has fixed costs of ₹6, 00,000 per annum. It manufactures a single product which it sells for ₹200 per unit. Its contribution to sales ratio is 40%. Its break-even point in units is:

A. 7,500 units

B. 8,000 units
C. 3,000 units
D. 1,500 units

v) The budgeted fixed overheads for a budgeted production of 10,000 units is ₹20,000. For a certain period the actual production was 11,000 units and actual expenditure came to ₹24,000. Then the volume variance is
A. 4,000(A)
B. 2,000 (F)
C. 2,000 (A)
D. None of these.

c) Define the following terms in not more than two or three lines. [5]
i) Zero defects
ii) The Shewhart Cycle
iii) Cost Driver
iv) Talent Drain
v) V in VAT Analysis

d) Write out what the following abbreviations stands for in the context of Enterprise Performance Management. [5]
i) APQC
ii) DPMO
iii) WAITRO
iv) USCF
v) ECE

2.

a) List out the ten principles of Lean Supply Chains. [7]

b) K Company has the capacity of production of 80,000 units and presently sells 20,000 units at ₹ 100 each. The demand is sensitive to Selling Price and it has been observed that for every reduction of ₹ 10 in Selling Price, the demand is doubled.

Required:
i) What should be the Target Cost at full capacity, it Profit Margin on Sale is 25%?
ii) What should be the cost reduction scheme if at present 40% of Cost is variable, with same % of profit?
iii) If Rate of Return desired is 16%, what will be the maximum investment at full capacity? [2+4+2=8]

3.

a) Indo Gulf Fertilizers Ltd. supports the concept of the tero-technology of Life Cycle Costing for new investment decisions covering its engineering activities. The company is to replace a number of its machines and the Production Manager is to run between the "X" machine, a more expensive machine with a life of 12 years, and the "W" machine with an estimated life of 6 years. If the "W" machine chosen it is likely that it would be replaced at the end of 6 years by another "W" machine. The pattern of maintenance and running costs differs between the two types of machine and relevant data are shown below :

Particulars	X(₹)	W(₹)
Purchase price	19,000	13,000

Trade-in-value	3,000	3,000
Annual repair costs	2,000	2,600
Overhead costs (in 8th & 4th year respectively)	4,000	2,000
Estimated financing costs averaged over machine life (p.a.)	10%	10%

You are required to recommend, with supporting figures, which machine to purchase, stating any assumptions made. [10]

b) The impact of control system on Human behavior can be better explained by Budgetary Control. Explain. [5]

4.

a) Excellent, a Scientific Equipment manufacturing company is engaged in producing different types of high class equipment for use in science laboratories. The company has two different assembly lines to produce its most popular product. The processing time for each of the assembly lines is regarded as a random variable and is described by the following distributions:

Processing time (minutes)	Assembly A_1	Assembly A_2
20	0.20	0.10
21	0.40	0.15
22	0.20	0.40
23	0.15	0.25
24	0.05	0.10

Using the following random numbers, generate data on the process times for 15 units of the item and compute the expected process time for the product.

3441, 7674, 4349, 4383, 8311, 1519, 0236, 4594, 1554, 0575, 8900, 8008, 2874, 2434, 0993

For the purpose, read the numbers horizontally, taking the first two digits for the processing time on assembly A_1 and the last two digits for processing time on assembly A_2. [10+2]

b) What is the 5-S Concept? [3]

5.

a) F Manufacturing Ltd. uses the three variances method to analyze the manufacturing overhead variances. Manufacturing overhead variances for the fiscal year just ended were computed as follows:
Spending - ₹ 86,000 Adverse
Efficiency- ₹ 36,000 Favorable
Volume - ₹ 80,000 Favorable
The manufacturing overhead application rate for the year was ₹ 160 per machine hour of which ₹ 60 per machine hour was the variable component. The year-end balance in the Manufacturing Overhead Control Account was ₹ 16,50,000 and the standard machine hours for the year were 11,300.
From the above data compute: (i) Budgeted machine hours, (ii) Actual machine hours, (iii) Applied manufacturing overhead, (iv) Total amount of fixed overhead cost. [2.5 × 4]

b) What are the benefits of Kaizen Procedure? [5]

6.

a) Write the difference between Theory X vs. Theory Y. [3]

b) The Famous Oil Corporation of India is considering whether to go for an off-shore oil drilling contract to be awarded in Kolkata High. If they bid, value would be Rs. 600 million with a 65% change of gaining the contract. They may set up a new drilling operation or move already existing operation, which has proved successful, to the new site. The probability of success and expected returns are as follows:

Outcome	New Drilling Operation		Existing Operation	
	Probability	Expected Revenue (₹ Million)	Probability	Expected Revenue (₹ Million)
Success	0.75	800	0.85	700
Failure	0.25	200	0.15	350

If the Corporation do not bid or lose the contract, they can use the Rs. 600 million to modernize their operation. This would result in a return of either 5% or 8% on the sum invested with probabilities 0.45 and 0.55.
(Assume that all costs and revenue have been discounted to present value)
(i) Construct a decision tree for the problem showing clearly the course of action.
(ii) By applying an appropriate decision criterion recommended whether or not the Oil India Corporation should bit the contract. [5+7]

7. Best Ltd. has two manufacturing departments organised into separate profit centres known as the Basic unit and Processing unit. The Basic unit has a production capacity of 4,000 tonnes per month of Latex but at present its sales are limited ₹ 2,000 tonnes to outside market and 1,200 tonnes to the Processing unit.
The transfer price for the year 2013 was agreed at ₹ 400 per tonne. This price has been fixed in line with the external wholesale trade price on 1st January 2013. However due to heavy competition the Basic unit has been forced to reduce the wholesale trade price to ₹ 360 per tonne with effect from 1st June, 2013.
This price however was not made applicable to the sales made to the Processing unit of the company. The Processing unit applied for revision of the price as applicable to the outside market buyers as from 1st June 2013 but the same was turned down by the basic unit.
The Processing unit refines Latex and packs the output Known as 'Liquid – L' in drums of 50 kgs each. The selling price of 'Liquid – L' is ₹ 40 per drum. The Processing unit has a potential of selling a further quantity of 16,000 drums of 'Liquid – L' provided the overall price is reduced to ₹ 32 per drum. In that event it can buy the additional 800 tonnes of Latex from the basic unit whose capacity can be fully utilised. The outside market will not however absorb more than the present quantity of 2,000 tonnes.

The cost data relevant to the operations are:

	Basic Unit ₹	Processing Unit ₹
Raw Materials/tonne	70	Transfer Price
Variable Cost/tonne	140	170
Fixed Costs/month	3,00,000	1,20,000

You are required:

(i) Prepare statement showing the estimated profitability for June 2013 for each unit and the company as a whole on the following bases:

(a) At 80% and 100% capacity utilisation of the Basic unit at the market price and transfer price to the Processing unit of ₹ 400 per tonne.

(b) At 80% capacity utilisation of the basic unit at the market price of ₹ 360 per tonne and the transfer price to the Processing unit of ₹ 400 per tonne.

(c) At 100% capacity utilisation of the Basic unit at the market price and transfer price to the Processing unit of ₹ 360 per tonne.

(ii) Comment on the effect of the company's transfer pricing policy on the profitability of the Processing Unit. [6+3+3+3]

8. Write short notes on any three: [5×3=15]

a) Cost Break-down Structure (CBS)

b) Demand Stimulation :

c) Philosophy of Quality Circle.

d) Drum-Buffer-Rope application with relation to Theory of Constraints