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.

Please: (i) Answer all part of a question at one place only.
(ii) Open a new page for answer to a new question.
Working Notes should form part of the answer.
Whenever necessary, suitable assumptions should be made and indicated in answer by the candidates.

1. (a) In each of the cases given below, only one is the most appropriate option. Indicate the correct answer (=1 mark) and show your workings/reasons briefly in support of your answer (=1 mark): [2×5=10]

(i) Back flush costing is most likely to be used when
- **(A)** Management desires sequential tracking of costs
- **(B)** A Just-in-Time inventory philosophy has been adopted
- **(C)** The company carries significant amount of inventory
- **(D)** Actual production costs are debited to work-in-progress

(ii) In calculating the life cycle costs of a product, which of the following items would be included?

- **I.** Planning and concept design costs
- **II.** Preliminary and detailed design costs
- **III.** Testing costs
- **IV.** Production costs
- **V.** Distribution costs

- **(A)** All of the above
- **(B)** IV and V
- **(C)** II, IV and V
- **(D)** IV

(iii) A company's approach to a make-or-buy-decision
- **(A)** Depends on whether the company is operating at or below normal volume
- **(B)** Involves an analysis of avoidable cost
- **(C)** Should use absorption (full) costing
- **(D)** Should use activity-based-costing

(iv) When a manager is concerned with monitoring total cost, total revenue, and net profit conditioned upon the level of productivity, an accountant should normally recommended.

	Flexible Budgeting	Standard Costing
(A)	Yes	Yes
(B)	Yes	No
(C)	No	Yes
(D)	No	No

(v) The selling price of product P is set at ₹ 1,500 for each unit and sales for the coming year are expected to be 500 units.

If the company requires a return of 15% in the coming year on its investment of ₹ 15,00,000 in product P. the TARGET cost for each unit for the coming year is.

(A) ₹ 930
(B) ₹ 990
(C) ₹1,050
(D) ₹1,110

(b) Expand the following abbreviation: **[1×5]**

(i) CBS

(ii) LCC

(iii) WAITRO

(iv) QFD

(v) MPS

(c) Define the following terms: **[1×5]**

(i) ERP

(ii) MPS

(iii) Decision Tree Analysis

(iv) Quality Planning

(v) Quality Circle

(d) State whether the following statements given below are 'True' or 'False'. If True, simply rewrite the given statement (1 mark). If False, state it as False (½ mark) and rewrite the correct statement (½ mark): **[1x5]**

(i) Theory Y style of management is a highly auto crating style.

(ii) The matrix organization structure is suitable for large projects.

(iii) The key factors of 'Theory of Constraints' are Contribution and Profit.

(iv) Life Costing is a technique to establish the total cost of ownership.

(v) To convert the assignment problem into a maximization problem, all elements of the matrix are deducted from the highest element in the matrix.

2. (a) Kolkata City Corporation has decided to carry out road repairs on main four entries of the city. The Government has agreed to make a special grant of ₹ 53 Lakhs towards the cost with a condition that the repairs must be done at the lowest cost and quickest time. If conditions so warrant, Supplementary grant will also be considered favourably. The Corporation has floated tenders and 5 Contractors have sent in their bids. In order to expedite work, one road will be awarded to only one contractor.

Contractors/Road	R_1	R_2	R_3	R_4
C_1	9	14	19	15
C_2	7	17	20	19
C_3	9	18	21	18
C_4	10	12	18	19
C_5	10	15	21	16

As a cost Accountant, You have to:

(i) Find out the best way of assigning of repair work to the contractors with the costs.

(ii) If it is necessary to seek supplementary grants, then what should be the amount sought?

(iii) Which of the five Contractors will be unsuccessful in his bid? **[3+2+2=7]**

(b) A manufacturer of fountain pens selling in the market at ₹ 100 per dozen makes an average net profit of 20% on sales by producing 50,000 dozen per annum against a capacity of 75,000 dozens. His Cost Sheet for the year 2015 was as under:

	Cost per dozen (₹)
Direct Materials	36
Direct Wages	30
Works overheads (50% of this is variable)	10
Sales overhead (25% of this is variable)	4

During next year, he anticipates his fixed costs to increase by 6%, Cost of Direct Materials by 5% and labour (with whom an agreement had been concluded) by 10%. Market enquiries revealed that the selling price of the product and quantity will remain unchanged during the next year.

An enquiry has been received for the supply of 10,000 dozens to a customer. What could be the lowest quotation, if the business wants to make a minimum profit of ₹ 8 lakhs during the next year? Give detailed workings. **[8]**

3. (a) What do you mean by 'Simulation'? **[3]**

(b) Patients arriving at a village dispensary are treated by a doctor on a first-come-first-served basis. The inter-arrival time of the patients is known to be uniformly distributed between 0 and 80 minutes, while their service time is known to be uniformly distributed between 15 and 40 minutes.

It is desired to simulate the system and determine the average time a patient has to be in the queue for getting service and the proportion of time the doctor would be idle.

Carry out the simulation using the following sequences of random numbers. The numbers have been selected between 00 and 80 to estimate inter-arrival times and between 15 and 40 to estimate the service times required by the patients.

Series 1	07	21	12	80	08	03	32	65	43	74
Series 2	23	37	16	28	30	18	25	34	19	21

Assume Starting time as 8.00 A.M. **[12]**

4. (a) Explain the shortcomings of the Balanced Score card? **[4]**

(b) State the term 'Total Quality Management'. Describe its Objectives. **[4]**

(c) The following details relating to the Product 'X' during the month March, 2015 are available.

You are required to compute:

(i) Material Price Variance.
(ii) Material Usage Variance.
(iii) Material Cost Variance.
(iv) Labour Rate Variance.
(v) Labour Efficiency Variance.
(vi) Labour Cost Variance.

You are also required to reconcile the standard and actual cost with the help of such variances.

Standard Cost per unit:
Materials 50 kg. @ ₹ 40 per kg.
Labour 400 hrs. @ ₹ 1.00 per hour
Actual Cost for the month:
Material 4,900 kgs. @ 42 per kg.
Labour 39,600 hours @ ₹ 1.10 per hour
Actual production—100 units **[6+1=7]**

5. (a) State 'Aggregate Planning'? Describe its techniques. **[1+4=5]**

(b) Ankita Road Liner is a transport Company, that transport goods all over India and it measures quality of services in terms of:

- Time required to transport goods.
- On-time delivery.
- Number of lost or damaged cartons.

To improve its business prospects and performance, the company is seriously considering to install a Scheduling and Tracking System, which involves an annual outlay of ₹ 1,50,000, besides equipments costing ₹ 2,00,000 needed for installation of the system. The company proposes to utilize the proceeds of the Fixed Deposit maturing next month to purchase the equipment. The rate of interest at present on deposit is 10%. The company furnishes the following information about its present and anticipated future performance:

	Current	Expected
On-time delivery	85%	95%
Variable Cost per carton lost or damaged	₹ 50	₹ 50
Fixed Cost per Carton lost	₹ 30	₹ 30
Number of Cartons lost or damaged	3,000	1,000

The Company expects that each per cent point increase in on-time performance will result in revenue increase of ₹ 18,000 per annum. Contribution margin of 45% is required.

As a Professional Cost and Management Account, advise whether Ankita Road Liner acquire and install the new system. **[10]**

6. (a) Seasonal Ltd. is manufacturing Woolen Garments. It faces high demand during Winter and slack demand during Summer. Advise The Production Manager of Seasonal Ltd. how to adjust the production capacity to meet the current demand. **[8]**

(b) Enumerate the options available to a firm which wants to stimulate demand in order to utilize its idle capacity. **[5]**

(c) What is Linear Decision Rule? **[2]**

7. (a) List the benefits of Activity Based Costing? **[5]**

(b) Karishma Enterprises produces a Product X, using Raw Materials A and B. The Standard Mix of A and B is 1:1 and the Standard Loss is 10% of input. Compute the missing information indicated by '?' based on the data given below: **[10]**

Particulars	A	B	Total
Standard price of Raw Material (₹/Kg.)	24	30	
Actual Input (Kg.)	?	70	
Actual Output (Kg.)			?
Actual Price (₹/Kg.)	30	?	
Standard Input Quantity (Kg.)	?	?	
Yield Variance (Sub Usage)	?	?	270(A)
Mix Variance	?	?	?
Usage Variance	?	?	?
Price Variance	?	?	?
Cost Variance	0	?	1300(A)

8. Write Short Notes on *any three* out of the following: **[3x5]**

(i) Drum – Buffer – Rope

(ii) Query Tools

(iii) Capacity requirement planning (CRP)

(iv) Mainframes

(v) Enterprise Resource Planning (ERP)