M.Com. (Semester – III) Examination, November 2017
COO3A2N : COST MANAGEMENT AND CONTROL (OA-18)

Duration : 3 Hours

Max. Marks : 60

Instructions : i) This paper consists **nine** question carrying **equal** marks.
ii) Question No. **1** consists of **5 compulsory** questions of **2 marks each**.
iii) Answer **any 5** questions from question **2, 3, 4, 5, 6, 7, 8** and **9**.
iv) **Each** question carries **10** marks. Figures to the **right** indicate marks.

1. Answer the following : (2×5=10)

   a) What do you understand by term Cost Pools ?

   b) State any four advantages of Cost Plus method of transfer pricing.

   c) What is Kaizen Costing ?

   d) State the different types of Network Diagram.

   e) Define the term degeneracy in transportation problem.

2. a) Goa Handicraft makes and sells a labour-intensive product. Its labour force has a learning rate of 80%, applicable only to direct labour and not to variable overhead. The cost per unit of first product is as follows : 6

	Rs.
Direct Materials	10,000
Direct Labour (at Rs. 4 per hour)	8,000
Variable overhead	2,000
Total variable cost	**20,000**

   Goa Handicraft has received an order from Goa University, for 4 units of product. Another customer Xavier's is also interested in purchasing 4 units of the product. Goa Handicraft has the capacity to fulfill both the orders. Xavier's presently purchases this product in the market for Rs. 17,200 and is willing to pay this price per unit of Goa Handicraft's product. But Goa University lets Goa Handicraft choose one of the following options :

   1) A price of Rs. 16,500 per unit for the 4 units it proposes to take from Goa Handicraft.

      OR

P.T.O.

2) Supply Goa University idle Intern students (Labour force), for only 4 units of production, with Goa Handicraft having to pay only Rs. 1 per labour hour to Goa university's Intern student. Goa University Intern will be withdrawn after the first 4 units are produced. In this case Goa Handicraft need not use its labour for producing Goa University's requirements. Goa university assures Goa Handicraft that its Intern students also has a learning rate of 80%. In this option, Goa university offers to buy the product from Goa Handicraft at only Rs. 14,000 per unit.

Goa University and Xavier's not know of each other's offer. If both orders came before any work started, what is the best option that Goa Handicraft may choose ? Present suitable calculations in favour of your argument.

b) Define TQM. And state the various steps to be taken in the implementations of TQM. **4**

3. A small project is composed of seven activities, whose time estimates (in days) are listed below. Activities are identified by their i) and j) node numbers. **10**

Activity i	1	1	1	2	3	4	5
Activity j	2	3	4	5	5	6	6
Duration t_o	2	2	4	2	4	4	6
Duration t_m	2	8	4	2	10	10	12
Duration t_p	14	14	16	2	28	16	30

1) Draw the project network. What is the expected project length ?

2) Find the EST, EFT, LST, LFT and variance of each activity.

3) If the project due date is 38 days, what is the probability of meeting the due date ?
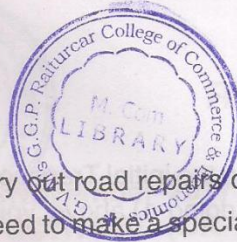
4. A Goa Municipal Corporation has decided to carry out road repairs on 4 main roads in the Panaji city. The government has agreed to make a special grant of Rs. 50 lacs towards the cost with the condition that the repairs should be carried out at lower cost. Five contractors have sent their bids. Only one road will be awarded to one contractor. The bids are given below : **10**

(Rs. in lacs)

Contractor/Road	R1	R2	R3	R4
C1	9	14	19	15
C2	7	17	20	19
C3	9	18	21	18
C4	10	12	18	19
C5	10	15	21	16

You are informed that C2 should get R1 and C4 should get R2 to minimize costs.

1) What is the minimum cost allocation ?

2) How much is the minimum discount that the eliminated contractor should offer for meeting a contract ?

5. A company has 3 factories F1, F2 and F3, which supply the same product to 5 agencies A1, A2, A3, A4 and A5. Unit production cost, shipping costs and selling prices differ among the different sources and destinations are given below : **10**

	F1	F2	F3
Production Cost (Rs./unit)	28	35	29
Production Capacity (No. of Units)	110	240	125

Agencies	A1	A2	A3	A4	A5
Selling Price Rs./unit	40	48	42	45	41
Demand (No. of unit)	80	100	75	45	125

Shipping costs Rs./unit	A1	A2	A3	A4	A5
F1	3	9	8	12	8
F2	6	10	6	2	5
F3	3	10	3	6	8

P. T. O.

1) Set up the initial Transportation Matrix for minimization.
2) After doing 1) above, you are given the following additional information.

   a) 40 units must be transported from F2 to A2 as per an earlier agreement made F2 with A2. This quantity is included in the figures given for total production and demand at these locations.

   b) Not more than 30 units may be sent from F1 to A1 since the transporter's vehicle lack space in this route. Incorporating conditions a) and b) above, obtain the initial basic feasible solution by Vogel's Approximation Method. (Do not attempt to continue for the full and final solution).

6. A dealer has to purchase scientific and ordinary calculators and sell them at a profit of Rs. 22 and Rs. 18 per unit respectively. The purchase price of scientific and ordinary calculators is Rs. 360 and Rs. 240 per unit respectively. Due to restraints, he can invest a maximum of Rs. 5,760 and buy at the most only 20 units. Formulate as LLP and solve it by simplex method. **10**

7. Define Activity Based Costing. What are the steps involved in activity based costing ? Also distinguish between Traditional Costing and ABC. **10**

8. a) What do you understand by Life Cycle Costing ? Explain with help of diagram the phases in Product Life Cycle. **6**

   b) What are various centers of responsibility accounting ? Explain the benefits of the responsibility accounting. **4**

9. a) What do you mean by performance measurement ? Explain in detail the EVA technique of performance measure and its advantages. **6**

   b) 'Cost management information is assemble to aid management' explain in the light of contemporary business environment. **4**

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