



M.Com. (Semester – IV) Examination, November 2016
COO4A2 : COST MANAGEMENT (OA – 18)

Duration : 3 Hours

Max. Marks : 60

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

1. Answer the following questions : (5×2=10)
 - a) Mention any two differences between Cost Pools and Cost Objects.
 - b) Give any two merits of Kaizen Costing.
 - c) State any two applications of Linear Programming Techniques.
 - d) What is a Transportation Problem ?
 - e) Differentiate between ROI and EVA method of Performance Measurement (any two).
2. What is Critical Path Method ? State its assumptions and usefulness. 10
3. What is an Assignment Problem ? What are its stages to the methodology ? 10
4. Define 'Target Costing'. Explain the cost reduction methods in Target Costing. 10
5. A) What is Transfer Pricing ? 2
B) What are the methods and benefits of using Transfer Pricing in Multinational Companies ? 8



6. Five swimmers are eligible to compete in a relay team which is to consist of four swimmers swimming four different swimming styles - back stroke, breast stroke, free style and butterfly. The time taken for the five swimmers – Anand, Bhaskar, Chandru, Dorai and Eshwar to cover a distance of 100 meters in various swimming styles are given below in minutes : seconds. Anand swims the backstroke in 1:09, the breast stroke in 1:15 and has never competed in the free style or butterfly. Bhaskar is a free style specialist averaging 1:01 but can also swim the breast stroke in 1:16 and butterfly in 1:20. Chandru swims all styles-backstroke 1:10, butterfly 1:12, freestyle 1:05 and breast stroke in 1:20. Dorai swims only the butterfly 1:11 while Eshwar swims the back stroke in 1:20 and breast stroke in 1:16, the free style in 1:06 and butterfly in 1:10. Which swimmer should be assigned to which swimming style ? Who will not be in the relay ? 10
7. Below is a PERT network and related set of activity time : 10

i-j	1-2	1-4	1-3	2-6	3-4	3-5	3-7	4-6	5-6	5-7	6-8	7-8
Activity	A	B	C	D	E	F	G	H	I	J	K	L
t_o	10	12	8	4	0	12	6	9	4	0	5	9
t_m	13	15	11	7	0	18	12	12	6	0	8	12
t_p	22	18	20	16	0	36	18	27	8	0	11	13

Required :

- Draw a network diagram and identify its critical path and duration.
 - Determine expected time of each activity.
 - Determine earliest expected completion time, latest expected completion time and total float of each activity.
 - Determine Standard Deviation of expected completion time for only those activities on the critical path.
8. A) A company buying scrap metal has two types of scrap metals available. The first type of scrap metal has 30% of metal A, 20% of metal B and 50% metal C by weight. The second scrap has 40% of metal A, 10% of metal B and 30% of metal C. The company requires atleast 240 kg of metal A, 100 kg of metal B and 290 kg of metal C. The price per kg of the two scrap are Rs. 120 and Rs. 160 respectively. Using Graphical Method of Linear Programming Problem determine the optimum quantities of the two scraps to be purchased so that the requirements of the three metals are satisfied at a minimum cost. 4



B) Use simplex method to solve the following Linear Programming Problem.

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$$\text{Max } Z = 6x_1 + 8x_2$$

Subject to constraints :

$$2x_1 + 3x_2 \leq 16$$

$$4x_1 + 2x_2 \leq 16$$

9. XYZ Co. provided the following data seeking your advice on optimum investment strategy :

10

Investment made at the beginning of the Year	Net Return Data (in Paisa) of Selected Investments				Amount Available (Rs. in Lacs)
	P	Q	R	S	
1	95	80	70	60	70
2	75	65	60	50	40
3	70	45	50	40	90
4	60	40	40	30	30
Maximum Investment (Rs. in Lacs)	40	50	60	60	

The following additional information is also provided :

- P, Q, R and S represent the selected investments.
- The company has decided to have a four year investment plan.
- The policy of the company is that the amount invested in any year will remain so until the end of the fourth year.
- The values in paisa represent the net return on investment of one rupee till the end of the planning horizon. (For e.g. a rupee invested in Investment P at the beginning of year 1 will grow at 1.95 by the end of fourth year, yielding a return of 95 paisa). Using the above determine optimum investment strategy using Vogel's Approximation Method.