M.Com. Semester -III End Examination, November 2023
COM- 626 Cost Management and Control

Duration: 2 Hours   Total Marks: 40

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Instructions: 1) This paper consists of six questions carrying equal marks.

2) Question No. 1 is compulsory and consists of 5 questions of 2 marks each.

3) Answer any three questions from Q. No. 2,3,4,5 and 6.

4) Each question carries 10 marks. Figures to the right indicate marks.

Q.1. Answer the following questions:-   **(5x2= 10 marks)**

   a) Discuss the Steps in Target costing?

   b) Explain the four components of Balanced scorecard.

   c) State and explain any two strategies of Competitive advantage.

   d) Discuss the objectives of Transfer pricing?

   e) Identify the applications of Learning curve theory?

Q.2. The law firm of Singhania Brothers provides legal services for clients. During the year, corporate clients required 5,000 hours of legal services, while individuals required 3,000 hours. The firm has traditionally used direct labor hours to assign overheads.

However, Mr. Singhania believes services to businesses cost more than services to individuals and wishes to adopt activity-based costing. The firm's revenue and costs for the year are shown below:

	Corporate	Individual	Total
Revenue	Rs.1,50,000	Rs.1,50,000	Rs.3,00,000
Expenses: Lawyers salaries	Rs.1,00,000	Rs.50,000	Rs.1,50,000
Overheads: Filing Quality Control Data entry			10,000 5,000 25,000
Total Overhead			Rs.40,000

Mr. Singhania has kept records of the following data for use in the new Activity- based costing system:

		Activity level	
Overhead Cost	Cost Driver	Corporate	Individual
Filing	No. of Clients	5	5
Quality Control	No. of hours spent	75	25
Data entry	No. of Pages entered	1,000	1500

a) Prepare an income statement showing profits by segments using the traditional direct hour allocation base.

b) Prepare an income statement showing profits by segments using three cost drivers in the ABC model.

c) Discuss the best way to allocate costs in this Example and include the approximate difference in profits between corporate and Individual clients.   **(10 marks)**

Q.3. A project consists of the following activities:

Activity	Predecessors	Duration		
		Optimistic	Most Likely	Pessimistic
A	-	5	6	7
B	-	1	3	5
C	-	1	4	7
D	A	1	2	3
E	B	1	2	9
F	C	1	5	9
G	C	2	2	8
H	E, F	4	4	10
I	D	2	5	8
J	H, G	2	2	8

a) Draw the PERT network diagram.

b) Find the Expected duration and variance for each activity.

c) Identify the critical path and expected project length.   **(10 marks)**

Q.4. A firm is engaged in breeding hens. They are feed on various items grown in the farm in order to supply the nutrients namely N1, N2 and N3. It becomes necessary to buy two products namely P1 and P2. One unit of product P1 consists of 36 units of N1, 3 units of N2 and 20 units of N3. One unit of product P2 consists of 6 units of N1, 12 units of N2 and 10 units of N3. The minimum requirement of N1, N2 and N3 is 108 units, 36 units and 100 units respectively. Products P1 and P2 cost Rs. 20 per unit and 40 per unit respectively. Formulate mathematical model and solve graphically.   **(10 marks)**

OR

Q.4. A manufacturing unit produces two products G1 and G2. The profit of each product is:

G1= Rs.20 per unit

G2= Rs.15 per unit

Following are the constraints:

Products	Hours per unit	
	Machine Centre I	**Machine Centre II**
G1	4	2
G2	2	4
Total hours available	120	96

From the above given information, determine the combination of G1 and G2 which will Maximize the total profit by using the Simplex method.   **(10 marks)**

Q.5. The following information is provided by XYZ company. There are three warehouses namely Ponda, Margao & Panjim from where the goods are to be transported to four different markets-A, B, C & D. The cost of transporting goods from warehouse to market are as follows:

                                                                            (10 marks)

	A	B	C	D	Supply
Markets					
Warehouses					
Ponda	3	1	7	4	250
Margao	2	6	5	9	350
Panaji	8	3	3	2	400
Demand	200	300	350	150	

You are required to find:

a) Initial basic solution using North west corner method

b) Check optimality using MODI method

Q.6. Determine the most optimum assignment by using Hungarian method. The cost associated in performing this job with different combination of machines are as follows: -   **(10 marks)**

Jobs	Machines				
	A	B	C	D	E
1	13	8	16	18	19
2	9	15	24	9	12
3	12	9	4	4	4
4	6	12	10	8	13
5	15	17	18	12	20

************************Best of Luck************************************