

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.
(For candidates admitted during the academic year 2004-05 & thereafter)

SUBJECT CODE : **CM/MO/CC44**

B.Com. DEGREE EXAMINATION APRIL 2007
COMMERCE
FOURTH SEMESTER

COURSE : **MAJOR – OPTIONAL**
PAPER : **COST CONTROL**
TIME : **3 HOURS** **MAX. MARKS : 100**

SECTION - A

ANSWER ALL QUESTIONS: (10 x 3 = 30)

1. State the objectives of cost control.
2. What is EOQ?
3. Explain any two applications of marginal costing.
4. How is maximization problem in assignment solved?
5. Determine the EOQ and the number of orders to be placed, from the following data: ordering cost – Rs.200 per order, carrying cost 20% of the unit cost per year, unit cost Rs.25 and the annual requirement Rs.50,000.
6. Sales – Rs.1,00,000, Profit – Rs.10,000, Variable cost – 70% of sales. Find out: P/V Ratio, Fixed cost and sales volume to earn a profit of Rs.40,000.
7. From the following information, calculate Break even point in units and in sales value : Output – 3000 units, selling price – Rs.30 per unit, Variable cost – Rs.20 per unit and total fixed cost – Rs.20,000.
8. The standard material for producing 100 units is 120 kgs. at a standard price of Rs.50 per kg. 500 units were produced and the material consumed is 1000 kgs. at Rs.60 per kg. Calculate material cost and price variance.
9. Find the optimal solution for the assignment problem with the following cost matrix:

Salesman	Area			
	North	South	East	West
A	8	2	6	5
B	10	9	2	8
C	5	4	9	6
D	3	6	2	8

10. Find the initial basic feasible solution, by least cost method.

	W1	W2	W3	W4	SUPPLIES
F1	48	60	56	58	140
F2	45	55	53	60	260
F3	50	65	60	62	360
F4	52	64	55	61	220
Demand	200	320	250	210	

SECTION - B

ANSWER ANY FIVE QUESTIONS:

(5 x 8 = 40)

11. The company uses 8000 units of a product as raw material costing Rs.10 per unit. The administrative cost per purchase is Rs.40, the holding cost is 28% of the average inventory the company is following an optimal purchase policy and places order according to the EOQ. It has been offered a quantity discount of 1% if it purchases its entire requirement only four times a year. Should the company accept the discount of 1%? If not what minimum discount should the company demand?
12. Classify the following items in ABC classification :

Item	Annual consumption (units)	Unit price (Rs.)
1	200	40
2	100	360
3	2000	0.20
4	400	20
5	6000	0.04
6	1200	0.80
7	120	100
8	2000	0.70
9	1000	1
10	80	400

13. Suggest the most profitable product mix :

	Product I	Product II
Selling price	Rs.25	Rs.20
Material cost	Rs.8	Rs.6
Wages	Rs.6	Rs.4

Variable overhead – 150% of direct wages

Fixed overhead (Total) Rs.750

The desirable sales mix:

- 250 units of Product I and 250 units of Product II
- 400 units of Product II
- 400 units of Product I and 100 units of Product II
- 150 units of product I and 350 units of Product II

14. From the following information, Calculate :

- a) P/V Ratio
 b) Fixed expenses
 c) Break even sales
 d) Percentage of margin of safety

2004	Sales – Rs.45,000,	Total cost – Rs.40,000
2005	Rs.50,000,	Rs.43,000

15. Prepare a Flexible Budget for 8,000 units and 10,000 units from the following information.

Following is the cost per unit incurred for the production of 6,000 units.

Material cost	Rs.25
Labour cost	Rs.15
Direct expenses	Rs.10
Factory expenses	Rs.50 (60% fixed)
Administration expenses	Rs.25 (50% fixed)
Fixed overhead	Rs.20

16. Consider a problem of assigning four clerks to four jobs. The hours required to complete the task are given below:

Clerks	Jobs			
	A	B	C	D
C1	4	7	5	6
C2	-	8	7	4
C3	3	-	5	3
C4	6	6	4	2

17. Determine the initial feasible solution to the transportation problem by Vogel's approximation method:

	A	B	C	D	E	Supply
P	2	11	10	3	7	14
Q	1	4	7	2	1	8
R	3	9	4	8	12	9
Demand	3	3	4	5	6	

SECTION - C

ANSWER ANY TWO QUESTIONS:

(2 x 15 = 30)

18. The following particulars are taken from the records of a company engaged in manufacturing two products X and Y from a certain raw material :

	Product X	Product Y
	Cost per unit	Cost per unit
Materials (Rs.2.5 per kg.)	Rs.25	Rs.62.5
Labour (Rs.15 per hour)	Rs.37.50	Rs.75
Variable overheads	Rs.12.50	Rs.25
Sales	Rs.125	Rs.250
Fixed Overhead – Rs.50,000.		

Comment on the profitability of each when :

- Total availability of raw material is 20,000 kgs, and maximum sales potential of each product is 1000 units. Find the product mix to yield the maximum profit. Determine the maximum profit.
- Total sales in value is limited
- Labour time is limited
- Production capacity in units is a key factor.

19. From the following forecasts of income and expenditure, prepare a Cash budget for the months January to April 2004 :

Months	Sales	Purchases	Wages	Manufacturing expenses	Administrative expenses	Selling expenses
	Rs	Rs	Rs	Rs	Rs	Rs
2003 Nov	95,000	50,000	3,000	1,150	1,060	500
Dec	90,000	66,000	3,200	1,225	1,040	550
2004 Jan	1,00,000	68,000	2,500	990	1,100	700
Feb	1,50,000	72,000	3,000	1,050	1,150	620
Mar	1,26,000	82,500	2,400	1,100	1,220	570
Apr	1,52,000	95,000	2,600	1,200	1,180	710

Additional information:

- 50% sales are collected in the same month and the balance in equal installments in the two subsequent months.
- A dividend of Rs.10,000 is payable in April
- 25% of purchases are paid in the same month and the balance in the next month.
- Capital expenditure to be incurred – Plant purchased on 15th Jan for Rs.50,000 paid in the same month.
A building on 1st March for Rs.2,00,000 and the payments are to be made in monthly installments of Rs.20,000 each.
- 25% of Wages are paid in the same month and the balance next month.
- Lag in payment of Administrative and selling expenses is 1 month.
- Cash balance on 1.1.2004 – Rs.2,24,000.

20. A company manufactures a product, the particulars of which are given below :

a. Standard Mix

Material	Quantity	Rate (Rs.)
A	70	10
B	<u>30</u>	5
	100	
Loss 15%	<u>15</u>	
	<u>85</u>	

b. Actual results :

Material	Quantity	Rate (Rs.)
A	400	11
B	<u>200</u>	6
	600	
Loss at 10%	<u>60</u>	
	<u>570</u>	

Calculate Material Variances.

21. A company has four factories from which it ships its product to four warehouses which are the distribution centers. Transportation cost per unit between various combinations of factories and warehouses are :

FACTORY	W1	W2	W3	W4	SUPPLY
F1	48	60	56	58	140
F2	45	55	53	60	260
F3	50	65	60	62	360
F4	52	64	55	61	220
DEMAND	200	320	250	210	

Find the optimal transportation cost.

