PAPER 5: COST A/C & COST CONTROL
MAY 1997

Question No.1 is compulsory
Answer any four questions from the rest.
Working notes should form part of the answer.

Question 1

(a) The advent of operations research has afforded considerable scope for cost reduction." Explain **(3 Marks)**
(b) Describe the role of cost accountant in the area of operating efficiency. **(4 Marks)**
(c) "Optimum level of inventory is that which minimizes the total costs." Discuss. **(4 Marks)**
(d) The relevant data of X Ltd. for its three products A, Band C are as under: **(12 Marks)**

	A	B	C
Direct Material (Rs./Unit)	260	300	250
Direct Labour (Rs./Unit)	130	270	260
Variable Overheads (Rs./Unit)	110	230	180
Selling Price (Rs./Unit)	860	1,040	930
Machine Hours Required (Per Unit)	12	6	3

The estimated fixed overheads at four different levels of 3,600; 6,000; 8,400; and 10,800 machine hours are Rs. 1,00,000; Rs. 1,50,000; Rs. 2,20,000 and Rs. 3,00,000 respectively. The maximum demand of A , Band C in a cost period are 500; 300 and 1,800 units respectively.

You are required to find out (i) the most profitable product-mix at each level and (ii) the level of activity where the profit would be maximum.

Question 2 **(19 Marks)**

Navbharat Comrnerce College, Bombay has six sections of B.Com. and two sections of M.Com. with 40 and 30 students per section respectively., The college plans one day pleasure trip around the city for. the students once in an academic session during winter break' to ,visit park, zoo, planetarium and aquarium.

A Transporter used to provide the required number of buses at a flat rate of Rs. 700 per bus for the aforesaid purpose. In addition, a special permit fee of Rs. 50 per bus is required to be deposited with city municipal corporation. Each bus is 52 seater. Two seats are reserved for teachers who accompany in each bus. Each teacher is paid daily allowance of Rs.100/- for the day. No other costs in respect of teachers are relevant to the trip.

The approved caterers of the college supply breakfast, lunch and afternoon tea respectively at Rs. 7, Rs. 30 and Rs. 3 per student.

No entrance fee is charged at the park Entrance fees come to Rs. 5 per student both for the zoo and the aquarium. As regards planetarium the authorities charge/block entrance fee as under for group of students of educational instit1Jtions depending upon the number of students in a group:

Number of Students in a Group	Block Entrance Fee. Rs.
Upto 100	200
101- 200	300
201 & above	450

Cost of prizes to be awarded to the winners in different games being arranged in the park depend upon the strength of students in a trip. Cost of prizes to be distributed are :

Number of Students in a Trip	Cost of prizes Rs.
Upto 50	900
51-125	1.050
126-150	1,200
151-200	1,300
201- 250	1,400
251 & above	1,500

To meet the above costs the college collects Rs. 65 from each student who wish to join trip. The college releases subsidy of Rs. 10 per student in the trip towards it.

You are required to :

(a) Prepare a tabulated statement showing total costs at the levels of 60, 120, 180, 240 and 300 students indicating each item of cost.

(b) Compute average cost per student at each of the above levels.

(c) Calculate the number of students to break-even for the trip as the college suffered loss during the previous year despite 72% of the students having joined the trip.

Question 3 **(19 Marks)**

The following information is available. in respect of Y Ltd. for a week:

(a) 400 kg of raw material were actually used in producing product 'EXE'. The purchase cost thereof being Rs. 24,800. The standard price per kg of raw material is Rs. 60. The expected output is 12 units of product 'EXE' from each kg of raw material. Raw material price variance and usage variance as computed by cost accountant are Rs. 800 (adverse) and Rs. 600 (adverse) respectively.

(b) The week is of 40 hours. The standard time to produce one unit of 'EXE' is 30 minutes. The standard wage rate is Rs. 5 per labour hour. The company employs 60 workers who have been paid hourly wage rate as under:

Number of Workers	:	6	8	46
Hourly Wage Rate (Rs.)	:	4.80	5.20	5.00

(c) Budgeted overheads for a four-weekly period is Rs. 81,600. The actual fixed overheads spent during the said week are Rs. 19,800.

(d) Entire output of 'EXE' has been sold at its standard selling price of Rs. 15 per unit.

You are required to :

(i) Compute the variances relating to labour and overheads.

(ii) Prepare a statement showing total standard costs, standard profit, and actual profit for the week.

Question 4

Universe Ltd. manufactures two products X and y, It is facing severe competition in the market. The monthly sales potential in units at different selling prices as anticipated by the Sales Manager are as under: **(19 Marks)**

Product –X		Product – Y	
Selling Price Per Unit Rs.	Sales Potential (in units)	Selling Price Per Unit Rs.	Sales Potential (in units)
110	5,000	78	30,000
108	7,500	77	32,000
107	8,000	75	35,000
103	8,400	72	40,000
96	9,000	69	45,000

The total costs as disclosed by the budgets of the company are as follows :

	Product –X		Product – Y	
Output and sales per month (units)	5,000	9,000	30,000	45,000
'Total costs per month (Rs. in lacs)	5	6.6	18	25.5
Labour hours needed per month	20,000	36,000	60,000	90,000

You are required to find out the selling price and units to be sold to earn maximum profit where (a) labour hours are available without any restriction and (b) only 95,000 hours are available.

Question 5

(a) State the principles to be followed in control and accounting of wastage. **(7 Marks)**

(b) The trading results of ZED Ltd. for 1995-96 and 1996-97 are as follows : **(12 Marks)**

	1995-96 (Rs.)	1996-97 (Rs.)
Material	1,60,000	2,05,200
Wages	96,000	1,32,000
Variable Overheads	40,000	46,000
Fixed Overheads	50,000	54,800
Total Costs	**3,46,000**	**4,38,000**
Profit	54,000	90,000
Sales	**4,00,000**	**5,28,000**

Selling price was enhanced by 10% in 1996-97. Material prices and wage rates too have increased by 8% and 10% respectively.
Prepare a, statement showing how much each factor has contributed to the variation in profit.

Question 6

(a) In transfer pricing what is common conflict between a division and the company as a whole. **(6 Marks)**

(b) What is cost analysis? How it is useful in decision making? **(6 Marks)**

(c) A machine manufactures 10,000 units of a part at a total cost of Rs. 21 of which Rs. 18 is variable. This part is readily available in the market at Rs. 19 per unit.
If the part is purchased from the market then the machine can either be utilized to manufacture a component in same quantity contributing Rs. 2 per component or it can be hired out at Rs. 21,000.
Recommend which of the alternative is profitable? **(7 Marks)**