

2009

COMMERCE

Group—I

(Accounting & Control)

(Accounting for Managerial Decisions)

PAPER—IX

Full Marks : 100

Time : 4 hours

The figures in the right-hand margin indicate marks

*Candidates are required to give their answers in their
own words as far as practicable*

Illustrate the answers wherever necessary

(Turn Over)

(2)

FIRST HALF

(*Advanced Cost Accounting*)

[*Marks : 50*]

Answer Q. No. 1 and any other *two* from the rest, taking *one* from each Group

1. Answer any *two* of the following: 10 × 2

(a) (i) What is transfer pricing? What are its advantages?

(ii) What is Activity Based Costing and what are its basic steps? 5 + 5

(b) (i) What do you mean by 'Flexible Budget'? What purposes are usually served by such budgets?

(ii) From the following particulars you are required to prepare a Flexible Budget

at 60%, 80% and 90% levels of activity, showing clearly the Prime Cost and Profit :

	Per Unit Rs.
(A) Cost of Raw Materials	
consumed	10
(B) Direct wages paid	8
(C) Chargeable Expenses incurred	3
(D) Variable overheads incurred	4
(E) Semi-variable overheads at 100% level of activity— Rs. 50,000	
(F) Semi-variable Overheads vary in steps of Rs. 4,000 for each 1,500 units of output.	
(G) Present activity level (75%): 9,000 units.	
(H) Fixed Overheads (other than fixed element of Semi-variable overheads): Rs. 40,000 p.a.	

(I) Selling Price (per unit) : Rs. 55.

Show clearly all the calculations necessary in connection with the preparation of the budget. (1 + 2) + 7

(c) On 31st March, the following balances existed in a company's cost ledger :

	<u>Dr.</u> Rs.	<u>Cr.</u> Rs.
Stores ledger		
control account	6,02,870	
Work-in-progress		
control account	2,44,730	
Finished stock ledger		
control account	5,03,890	
Manufacturing overhead		
control account		21,050
Cost ledger control		
account		13,30,440
	<u><u>13,51,490</u></u>	<u><u>13,51,490</u></u>

During the next three months the following items arose :

	Rs.
Finished product (at cost)	4,21,670
Manufacturing overhead incurred	1,83,020
Raw materials purchased	2,46,000
Factory wages	1,01,060
Indirect labour	43,330
Cost of sales	3,71,780
Materials returned to production	2,54,630
Sales return at cost	10,760
Materials returned to supplier	5,800
Manufacturing overhead charged to production	1,54,400

You are required to writeup :

(i) Cost ledger control account ;

(ii) Stores ledger control account ;

(iii) Production overhead control account

(iv) Work-in-progress control account,

(v) Finished stock ledger control account. 10

(d) In a manufacturing company 10,000 kilolitres of *A* is processed to produce 6,000 kilolitres of *B* and 4,000 kilolitres of *C*. The joint cost before separation point came to an amount of Rs. 24,000. From the following particulars, calculate the apportionment of Joint Cost and the profit of each product under

(i) Physical measurement;

(ii) Market value at separation point, and

(iii) Market value after further processing.

	<u>Products</u>		
	<u>B</u>	<u>C</u>	
	Rs.	Rs.	
Unit selling price at separation point	5.00	3.75	
Unit selling price after further processing	7.00	7.50	
Further processing cost after separation	5,000	7,500	10

GROUP—A

Answer any *one* question

2. You are given following information relating to process III during the month of March, 2008 :

Opening stock : 1,600 units at Rs. 20,600.

Degree of completion: Materials 80%,
Labour 60%, Overhead 60%.

Transfer from Process II: 42,400 units at
Rs. 3,29,200.

Transfer to Process IV: 38,400 units.

Closing stock: 4,000 units.

Degree of completion: Materials 70%, Labour
50%, Overhead 50%.

Units scrapped: 1,600 units.

Degree of completion: Materials 100%, Labour
70%, Overhead 70%

Materials added in Process III: Rs. 1,58,080.

Direct labour amounted to Rs. 78,080.

Production overhead incurred Rs. 39,040.

The normal loss in the process was 5% of
production and scrap was sold at Rs. 3 per unit. Using
FIFO basis, prepare:

(a) Statement of equivalent production

(b) Statement of cost for each element

(c) Statement of apportionment of cost

(d) Statement of cost of transfer to Process IV

(e) Process III Account

(f) Abnormal Gain Account. $3 + 2 + 3 + 1 + 4 + 2$

3. (a) Illustrate the cost-volume-profit (C-V-P) analysis in Marginal Costing.

(b) A company manufactures only one product. Production is regular throughout the year and the capacity of the factory is 1,50,000 units per annum. The summarised Profit and Loss Account for the year 2008 as under was submitted at a Board Meeting:

	Rs.
Sales @ Rs. 10 per unit	10,00,000
Cost of sales :	
Direct materials	2,50,000
Direct labour	1,50,000

	Rs.
Production overhead :	
Variable	30,000
Fixed	2,20,000
Administration overhead :	
Fixed	1,00,000
Selling and Distribution overhead :	
Variable	40,000
Fixed	1,60,000
Profit	50,000

The alternative proposals are :

- (i) The Managing Director conveyed to the Board that a large retailer was interested to take a regular order of 30,000 units p.a. at a special price. This would in no way affect the volume or price of the regular sales of the company. No selling and distribution cost would be incurred on this retail sales.

Only a special packing would be required for display purposes and this would cost an additional 30 paise per unit. He wanted to know for his own information the price per unit at which the special order would break-even and the price for quoting purposes, providing a contribution of Rs. 60,000.

- (ii) The Personnel Director pleaded for a change in the method of wage remuneration. At present, direct labour was paid a piece rate of Rs. 1.50 per unit. If a group bonus scheme were introduced, the output would be better. The proposal was to set a target of 2,000 units per week throughout the company's 50 week year. For each 3 per cent increase in production, there would be an increase of 1 per cent on

the basic wages of each employee. No employee would suffer a reduction in basic wages. It was forecast that if the selling price was increased by 10% and advertising were increased by Rs. 1,60,000, sales of 1,30,000 units per annum would be achieved.

You are required to evaluate the proposals and give your recommendation.

6 + 9

GROUP—B

Answer any *one* question

4. (a) Explain the concept of 'standard hour'.
- (b) Priti Products has just completed its operations for the month of April 2009. The total standard

costs for all activities during April are given below :

	Total Standard Cost Rs.
Direct Materials	50,000
Direct Labour	90,000
Variable Factory Overheads	60,000

Variances from standards were analysed and recorded as under :

	Favourable Rs.	Unfavourable Rs.
Material Price Variance	2,000	—
Labour Rate Variance	—	1,500
Labour Efficiency Variance	—	3,000
Material Usage Variance	1,000	—
Overhead Price Variance	3,000	—
Overhead Efficiency Variance	—	2,000

You are required to compute the actual cost incurred during the month for Direct Materials, Direct Labour, and Variable Factory Overheads. There were no opening or closing balances of Materials. 3 + 12

5. (a) What methods have been prescribed in the provisions of Income Tax Act, 1961 in India for determining the 'Arms Length Price' for inter-divisional transfers? Explain 'Transactional Net Margin' method of determining Arms Length Price.

(b) You are given the following measures of performance of three divisions of a company (in thousand rupees):

Division	Net Assets Rs.	Operating Income Rs.
A	10,000	1,800
B	30,000	4,500
C	20,000	3,200

- (i) Calculate for each division the rate of return on net assets and the residual income considering 10% as the minimum desired rate of return.
- (ii) Rank the performance of each division under both the measures. Which measure do you prefer and why?
- (c) Briefly state and explain the techniques for overall performance appraisal. 4 + 6 + 5

SECOND HALF

(Advanced Management Accounting)

[Marks : 50]

Answer Q. No. 6 and any *two* from the rest

6. Answer any *two* of the following: 10 × 2
- (a) Enumerate the role of management accounting in business decision making process.
- (b) Is there any 'Ideal Ratio'? What are the different basis for fixing ideal financial ratios? Briefly explain any one of them.

(c) Consider the following ten investment projects :

Projects	Net Present Value	Cash Outflow in year-1	Cash outflow in year-2
(j)	(NPV _j)	(CF _{j1})	(CF _{j2})
1	55	75	40
2	75	80	85
3	50	75	8
4	60	35	100
5	105	80	160
6	12	20	9
7	60	70	5
8	120	155	0
9	50	55	20
10	40	10	90

The budget constraints for year-1 and year-2 are 400 and 350 respectively. The following project inter-dependencies exist :

(i) Projects 3 and 7 are mutually exclusive.

- (ii) Out of the set of projects 5, 8, 9 and 10 at least two must be accepted.
- (iii) Project 6 is a prerequisite for project 2.
- (iv) Project 8 can be delayed by one year. Such a delay would shift the cash outflows by one year and reduce the NPV of the project by 20.
- (v) Projects 4 and 5 are complementary. If the two are accepted together, the total cash outflow will be less by 8 per cent whereas the NPV will be more by 5 per cent.
- (vi) If project 8 is accepted, project 9 must also be accepted.

Develop an integer linear programming formulation of the above problem.

(d) A florist stocks a highly perishable flower. He sells the flowers @ Rs. 9 per dozen and earns a profit @ 200% on cost. Any flowers not sold the day they are stocked are worthless. Demand in dozens of flowers is expected as follows :

Demand:	0	1	2	3	4	5
(Dozen)						

Probability:	0.1	0.15	0.25	0.3	0.1	0.1
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How many flowers should the florist stock daily in order to maximise his expected net profit ?

7. (a) What do you understand by 'Factoring' ? What are its advantages to an enterprise ?

(b) The present credit terms of XYZ company are 1/10 net 30. His annual sales are Rs. 80 lakhs. Its average collection period is 20 days. Its variable costs and average total costs to sales

are 0.85 and 0.95 respectively and its cost of capital is 10%. The proportion of sales on which customers currently take discount is 0.6.

XYZ company is considering relaxing its discount terms to 2/10, net 30. Such relaxation is expected to increase sales by 5 lakhs, reduce the average collection period to 14 days and increase the proportion of discount to sales to 0.8. What will be the effect of relaxing the discount policy on the company's profit? Take

one year = 360 days.

5 + 10

8. A company is considering a proposal to purchase a new machine. The machine has an initial cost of 50 lakhs. The expected cash flows (CFAT) and their

respective probabilities of its 3 years life are as follows:

<u>Year-1</u>		<u>Year-2</u>		<u>Year-3</u>	
CFAT (in Rs. lakhs)	Probability	CFAT (in Rs. lakhs)	Probability	CFAT (in Rs. lakhs)	Probability
15	0.2	20	0.5	25	0.1
20	0.4	23	0.1	30	0.3
25	0.3	25	0.2	35	0.3
30	0.1	28	0.2	50	0.3

Assuming that the cash flows of different years are independent and the firm can invest in treasury bill at 5%:

- (a) Determine the expected NPV.
- (b) Determine the standard deviation of expected NPV.

**Profit and Loss Account for the year
ended 31.03.2009**

	Rs.		Rs.
Materials	8,36,000	Sales	22,00,000
Manufacturing expenses	6,08,000		
Factory Overhead	1,32,000		
Depreciation	48,000		
Administration overhead	1,80,000		
Selling and Distribution overhead	2,20,000		
Interest	16,000		
Profit	1,60,000		
	22,00,000		22,00,000

Determine the following ratios and comment thereon, basing your arguments on the industry averages given in brackets :

(a) Inventory turnover (10)

(b) Sales margin (3.5%).

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Interest	16,000		
Profit	1,60,000		
	22,00,000		22,00,000

Determine the following ratios and comment thereon, basing your arguments on the industry averages given in brackets :

(a) Inventory turnover (10)

(b) Sales margin (3.5%).

(c) Average Collection Period (45 days).

(d) Debt/Equity (3:2).

(e) Profit/Net worth (11.5%).

15

10. Define 'industrial sickness'. What are the causes of industrial sickness? Explain briefly the empirical model developed by Altman to predict corporate bankruptcy.

2 + 5 + 8