

2007

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 full marks.

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

Illustrate the- answers. wherever necessary..

First . Half

(Advanced Cost Accounting)

(Marks : 50)

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

Answer any two of the following : 10x2

- (a) In the course of manufacture of the main product 'P' by-products 'A' and 'B' **also emerge**. The joint **expenses** of manufacture amount to Rs. 1,19,550. All the three products are processed further after separation and sold as per details given here

(Turn Over)

Main Product		By Products	
epp		'Al	413)
Sales	(Rs.) 90 000	60 000	40 000
Cost incurred after separation (Rs.)	6,000	5,000	4,000
Profit as percentage on sales (%)	25	20	15

Total fixed **selling expenses** are 10% of total cost of sales which are apportioned to the three products in the ratio 20:40: 40.

- (i) Prepare a statement showing the apportionment of joint costs to the main product and the two by-products.
 - (ii) If the by-product 'A' is not subjected to further processing and is sold at the point of separation, for which there is a market at Rs. 58,500 without incurring any selling expenses, would you advise its disposal at the point of separation? Show the workings.
- (b) The following balances were extracted from a company's ledger as on 31st December, 2006

	Rs.	Rs.
Store Ledger Control A/c	48,836	—
Work-in-Progress Control A/c	14,745	—
Finished Stock Control A/c	21,980	—
Cost Ledger Control A/c		85,561
	85,561	85,561

Further transactions that took place during the following quarter are as follows

	Rs.
Factory overhead allocated to W-I-P	11,786
Goods finished - at cost	36,834
Raw materials purchased	22,422
Direct wages allocated to W-I-P	18,370
Cost of goods sold	42,000
Raw materials issued to production	17,000
Raw materials returned by supplier	1,000
Normal loss of raw material	1,300
WIP rejected (with no scrap value)	1,800
Customer's returns (at cost) of 'finished goods	.3,000

Prepare Store Ledger Control A/c, W- ' Ledger Control A/c and Finished Stock Control A/c. Assume that book of accounts are maintained under non integrated system.

- (c) **What do you mean by Activity Based Costing? What limitations of traditional costing give rise to Activity Based Costing ? Give the structural design for cost analysis, by its application. Provide a brief description also.**

- (d) Division A of a company, evaluated on profit centre basis, produces three products X, Y and Z. All the products are sold externally. The relevant data relating to the products are summarised below :

Products	X		
Market price per unit (Rs.)	46	48	40
Variable Cost of sales per unit in Division A (Rs.)	24	33	28
Labour hours required per unit of production		3	2

The variable cost of **sales includes** Rs. 2 per unit of each product, being the selling and distribution expenses.

Product Y has an internal demand by Division B located very adjacent to Division A. Division B requires 400 units of Y per year. If transfer is decided, the entire demand of Division B is to be satisfied; no partial fulfilment of the demand is acceptable to Division B.

The maximum market sales of the products are X-500 units, Y-800 units, and Z-300 units.

What should the transfer price be for each unit for the entire 400 units of Y, if the total labour hours available in Division A are limited at 3,800 hours ?

Group-A

Answer any one questions.

2. (a) Write the accounting treatments of Abnormal Loss in Process Costing.

(b) The following data are available in respect of

Process-3 for the month of April :	Rs.
Direct materials added in process	776
Direct labour	386
Production overhead	768
Transfer from process 2 4,200 units valued at	1,560
Transfer to process 4 3,650 units	
Stock on 1st April . .600 units valued at	390

Degree of completion of opening Stock

Materials added in Process	60%
Labour	50%
Overheads	40%

Stock on 30th April : 800 units

Degree of completion of closing stock 't-

Materials added in Process	80%
Labour	70%
Overhead	60%

Units Scrapped : 350

Degree of completion of scrapped units

Materials added in Process	100%
Labour	80%
Overhead	80%

Normal loss is 10% of Production

All units scrapped can be sold for Re. 0.10 per unit.

You are required to prepare an account for Process 3.

3+12

3. (a) Illustrate the impact of change in Selling Price as per Cost-Volume and Profit Analysis.

(b) Sweetee Food Products is a new entrant in the market for chocolates. It ' has introduced a new product Kancha-Mango. A carton contains. 50 Chocolates. A carton is therefore, considered the basic sales unit. Although management had made detailed estimates of costs and volumes prior to undertaking this venture, new projections based on actual cost experience are now required.

Income statements for each of the last two quarters are thought to be representative of the costs and productive efficiency we can expect in the next few quarters. There were virtually no inventories in hand at the end of each quarter. The income statements reveal the following

	First Quarter (Rs.)	Second Quarter (Rs.)
Sales :		
50,000 x Rs. 30	15,00,000	
70,000 x Rs. 30	—	21,00,000
Cost of goods sold	10,00,000	12,00,000
Gross Margin	5,00,000	9,00,000
Selling and Administration	7,00,000	7,80,000
Net. Income/Loss before taxes	(2,00,000)	1,20,000
Tax (Negative)	(80,000)	48,000
Net Income/Loss	<u>(1,20,000)</u> :	<u>72,000</u>

The firm's **average income-tax rate is 40%**: This figure. **has been used to estimate the tax liability arising from the Chocolate operations.**

Required

- (a) Management would like to know the breakeven point in terms of quarterly carton sales for Chocolates.
- (b) Management estimates that there is an investment of Rs. 15,00,000 in this product line. What quarterly carton sales and total revenues are required in each quarter to earn an after-tax return of 20% per annum on investment ?

- (c) The firm's marketing people predict that if the selling price, is reduced to Rs. 27.50 per carton and Rs. 2,00,000 advertising campaign among school children is set aside, sales will increase by 20%, over the second quarter sales. Should the Plan be implemented ? 3+12

Group-B

Answer any one questions.

4. (a) 'Flexible budget is a series of fixed budgets.' Comment on the statement.
- (b) **The Department of Commerce is going to publish the next issue of its Departmental journal. The accepted quotation provides the following**

	Rs.
Cost of paper (per sheet of two pages)-	0.3Q:
Printing charges (per forma of eight pages or part thereof)	300.00
Cover paper and printing (per piece)	6.00
Binding charges (per hundred copies or part thereof)	350.00
Transport charges (fixed)	50.00
Packaging charges (per 25 copies)	10.00
Expected profit by the Press	25% on
	total cost

Prepare a budget for printing 200 copies of the journal showing total costs for the following different volumes :

(i)	80 pages,	(ii)	90 pages,
(iii)	100 pages, and	(iv)	110 pages

3+12

5. (a) What do you mean by Performance Budgeting? How does it differ from Conventional Budgeting?

(b) A manufacturing company operates a standard costing system and shows the following data in respect of the month of November

Actual no. of working days.	22
Actual man-hours worked during the month	4,300
No. of units produced	425
Actual amount of overheads incurred	Rs. 1,800

Relevant information from the company's budget and standard cost data are as follows

Budgeted no.. of working days per month	24
Budgeted man-hours per month	5,040
Standard man-hours per unit of product	10
Standard overhead rate per man-hour	Re. 0.50

You are required to calculate for the month of November all possible overhead variances.

5+10

Second Half*(Advanced Management Accounting)*

[Marks : 501]

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

6. Answer any *two* of the following : 10x2
- (a) "The structure of Management Accounting depends upon the existence of various systems". What are those ? Discuss the limitations of Management Accounting.
- (b) What is the importance of ratio analysis ? Briefly discuss the importance. of Liquidity Ratio in ratio accounting.
- (c) Consider the following nine investment projects

<i>(All-figures are in Rs. crores)</i>			
Project	Net Present ' value	Cash .outflow in year-1	Cash outflow in .yew 2
G)	(NPVj)	(CFj1)	(CFj2)
1	44	50	48
2	30	40	22
3	20	10	40
4	25	36	5
5	35	25	60
6	24	43	15
7	42	40	0
8	28	33	14
9	60	75	48

The budget constraints for years 1 and 2 are Rs. 150 crores and Rs. 180 crores respectively. The following project interdependencies exist

- (i) **Project 1 and 2 are mutually exclusive;**
- (ii) **Out of the set of projects 4, 5 and 6 at least two must be accepted;**
- (iii) **Project 9 cannot be accepted unless project 4 and 6 are accepted;**
- (iv) **Project 7 can be delayed by one year. Such a delay would not change the amount of cash outflows but reduce the NPV to 35;**
- (v) **Projects 8 and 9 are complementary. If the two are accepted together, the total cash outflows will be less by 8 percent, whereas the NPV will be more by 10 percent.**

Develop a *integer linear programming* formulation of the 'above problem.

- (d) **Alfa Ltd. sells an electric motor but finds that it runs out of stock on occasions and thus loses the contribution on missed sales.**

The following information is available

Estimated demand	12000 units per year
Purchase price	Rs. 100 each
Selling price	Rs. 155 each
Lead time	5 days guaranteed
EOQ	1200 motors.

The company works a five-day week for 48 weeks a year. The demand figures have been analysed for the last 27 weeks

Motors Sold	Number of days level of sales occurred
30	10
40	20
50	50
60	30
70	15
80	5
90	5
	135

At present the company uses a re-order level of 250 motors and does not carry any safety stock because of guaranteed delivery time.

You are required to calculate

- (a) the amount of annual stock-out cost using the present re-order level.
- (b) unit of safety stock (on average **sales** basis), if the re-order level is being increased to 300 units.

7. The summarised Income Statement and Balance Sheet of Beta Ltd. are given here :

Income Statement for the year ended 31st March, 2007,

(Rs. '000)

Sales	1,600
Cost of goods sold	<u>1,310</u>
Gross margin	290
Selling & administrative Expenses	40
EBIT	250
Interest expenses	45
EBT	205
Tax paid	82
EAT	123

Earning per share (EPS) = Rs. 3.075

Balance Sheet as at 31st March, 2007

(Rs. '000)

Liabilities	Rs.	Assets	-Rs.
Paid-up Capital	400	Net fixed assets	800
(40,000 shares @ Rs. 10 each fully paid up)		Inventory	400
Retained earnings	120	Debtors	175
Debentures	700	Short-term marketable securities	75
Creditors	180	Cash	50
Bills Payable	20		
Other current liabilities	80		
	1,500		1,500

Price per share Rs. 15

Industry average ratios are

Current ratio	2.4
Quick ratio	1.5
Sales to inventory	8.0
Average collection period	36 days
Price per share to book value per share	1.6
Debt to assets	40%
Interest coverage ratio	6
Profit margin	7%
Price-Earning ratio	10
Return on total assets	11%

- (a) Beta Ltd. would like to borrow Rs. 5,00,000 from a bank for less than a year. Evaluate the firm's current **financial position by calculating ratios that you feel would be useful for the bank's evaluation.**
- (b) **What problem areas are, 'suggested 'by' your ratio analysis ? What may be the possible reasons for them ?**
- (c) Do you think, the bank should grant the loan?
- (d) If Beta Ltd's inventory turnover ratio and average collection period equalled the industry average, what amount of fund would be generated ? 15

8. (a) Point out the various causes of industrial sickness with special reference to India.

- (b) Enumerate the important studies made for predicting corporate sickness in U.S.A. and in India and explain briefly any one of them 5+10

9. (a) What do you understand by 'trade debtors'? What are the objectives of maintaining debtors?

(b) Gamma Company developing a new product makes a model for testing, and then a demonstration model and then goes for regular production. The time taken to make the first model in 300 hours and from past experience of similar models, it is known that a 90% learning curve applies. The average time for each of the first two production models will be-

(i) 270 hours	(ii) 243 hours
(iii) 216 hours	(iv) 219 hours.

Support the - correct figure with calculations.

(c) A group of customers want to enter into a contract with you to buy goods worth Rs. 20 lakh during 2007, the deliveries to be made in four equal instalments quarterly. The price of the commodity is Rs. 20 per unit on which, you expect * a. profit • of Rs. 10. The acceptance of this proposal would mean an additional recurring expenditure of Rs. 10,000 p.a. on your part.

The ageing schedule of accounts receivables in respect of this group of customers in the past was as follows :

Period	Percentage of bills for which payment received
At the end of 30 days	15%
At the end of 60 days	25%
At the end of 90 days	40%
At the end of 100 days	20%

Assuming an opportunity cost of 20% of the funds locked up in accounts receivables, will it be desirable to accept this proposal. 4+3+8

10. (a) What is meant by capital rationing?

- (b) A company is considering two mutually exclusive projects. **Both require an initial investment of Rs. 50,000 each and have a life of 5 years. The cost of capital of the company is 10% and tax-rate is 50%. The depreciation is charged on straight-line method. The estimated net cash inflows (before depreciation and tax) of the two projects are as follows**

Year	Project A (Re.)	Project B (Re.)
1	20,000	30,000.
2	22,000,	27,000
3	28,000	-22,000
4	25,000	25,000
5	30,000	20,000

Which project should be accepted as per NPV and IRR methods. 3+12