

C.A. IPCC

First Study

Subject: Cost Accounting & Financial Management

Instructions:

- (i) *All questions are compulsory.*
- (ii) *Date of Examination : 01.03.2010*
- (iii) *Total Number of Questions : 8*
- (iv) *Total marks : 100*
- (v) *Total duration : 3 Hours*
- (vi) *Use of two colour pens (black & blue or Black or Pink etc) is NOT allowed. Use only single colour pen.*
- (vii) *Begin answer of the next question in new page.*
- (viii) *Working note should form part of your answer.*

Question 1. Answer the following:

(a) Are fixed costs per unit variable in nature? If yes, why?

(b) Department L production overheads are absorbed using a direct labour hour rate. Budgeted production overheads for the department were Rs. 480,000 and the actual labour hours were 100,000. Actual production overheads amounted to Rs. 516,000. Based on the above data, and assuming that the production overheads were over absorbed by Rs. 24,000, what was the overhead absorption rate per labour hour?

(c) Anu Company has a Mumbai Plant that manufactures OTG. One component is XY chip. Expected demand is for 10,000 of these chips in March, 2009. Anu estimates the ordering cost per purchase order to be Rs. 250. The monthly carrying cost for one unit of XY in stock is Rs. 5.

Required:

1. Compute the EOQ for the XY chip.
2. Compute the number of deliveries of XY in March, 2009.

(d) “A favourable production volume variance may indicate that the capacity of the plant has not been estimated properly”. Do you agree with the statement? If yes, why?

(e) A company has made a profit of Rs. 50,000 during the year 2008-09. If the selling price and marginal cost of the product are Rs. 15 and Rs. 12 per unit respectively, find out the amount of margin of safety.

(5X2=10 Marks)

Question 2

The following is the Trading and Profit & Loss Account of 'Omega Limited.

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Particulars	Rs.	Particulars	Rs.
To Materials consumed	23,01,000	By Sales (30,000 units)	48,75,000
To Direct wages	12,05,750	By Finished goods stock (1,000 units)	1,30,000
To Production overheads	6,92,250	By Work-in-progress :	
		Materials 55,250	
		Wages 26,000	
		Production O/h <u>16,250</u>	97,500
To Administration overheads	3,10,375	By Dividends received	3,90,000
To Selling and distribution overheads	3,68,875	By Interest on Bank deposits	65,000
To preliminary expenses written off	22,750		
To Goodwill written off	45,500		
To Fines	3,250		
To Interest on mortgage	13,000		
To Loss on sale of machine	16,250		
To Taxation	1,95,000		
To Net profit for the year	3,83,500		
Total	55,57,500	Total	55,57,500

Omega Limited manufactures a standard unit. The Cost Accounting records of Omega Ltd. show the following:

- (i) Production overheads have been charged to work-in-progress at 20% on Prime cost.
- (ii) Administration Overheads have been recovered at Rs. 9.75 per finished Unit.
- (iii) Selling & distribution Overheads have been recovered at Rs. 13 per Unit sold.
- (iv) The Under- or Over-absorption of Overheads has not been transferred to costing P/ LA/c.

Required :

- (i) Prepare a proforma Costing Profit & Loss account, indicating net profit.

- (ii) Prepare Control accounts for production overheads: administration Overheads and selling & distribution Overheads.
- (iii) Prepare a statement reconciling the profit disclosed by cost records with that shown in Financial accounts.

(15 Marks)

Question 3

(a) Nile Construction Company commenced a contract on 1.7.08. The contract price is Rs. 9,00,000. Actual expenditure till 31.12.08 and estimated expenditure in 2009 are given below:

	Actual Till 31.12.08	Estimated for 2009
	Rs.	Rs.
Purchase of materials	1,50,000	2,60,000
Labour	1,10,000	1,20,000
Purchase of plant (original cost)	80,000	--
Miscellaneous expenses	40,000	71,000
Return of plant to stores on 31.12.08 (original cost)	20,000	50,000
	as at 31.12.08	as at 30.9.09
Materials at site	10,000	Nil
Work certified	4,00,000	Full
Work uncertified	15,000	Nil
Cash received	3,60,000	Full

Depreciation is charged on plant @ 20% p.a. on original cost (calculation to be made on time basis). The contract is likely to be completed by 30.9.09.

You are required to prepare the contract account for the year ended 31.12.09. It has been decided to estimate the total profit on the contract and to take to the credit of profit and loss account that proportion of estimated profit on realized basis which the work actually certified bears to the total contract.

(7 Marks)

(b) M/s. Eagle Transport Ltd. charges Rs. 60 per tonne for a 5-tonne lorry load from Calcutta to Durgapur. The charge of return trip is Rs. 56 per tonne.

In the month of July 1990, WBX 4889 made ten outward journeys with full load out of which 3 tonnes were unloaded at Burdwan twice in the month. It returned once without any load from Burdwan.

The details of expenses and other details are as follows :

Annual fixed charges	Rs. 19,200
Annual maintenance charges	Rs. 9,600
Monthly operating charges	Rs. 1,202
Distance from Calcutta to Burdwan	120 kms.
Distance from Calcutta to Durgapur	210 kms.

WBX 4889 carried a load of 8 tonnes 5 times in the month while returning from Durgapur but was once caught by the police and fined Rs. 1,000.

You are required to calculate the cost per tonne-km. and also the profit in the month of July 1990 assuming that no concession is made for delivery at the intermediate stages.

(9 Marks)

Question 4. Answer the following:

(i) In Akanksha Ltd raw material passes through four processes A, B, C and D and the output of each process is the input of the subsequent process. The loss in the four processes A, B, C and D are respectively 25%, 20%, 20% and 16 % of the Input. If the end product at the end of process D is 40,000 kgs, what is the quantity of raw materials required along with its cost to be fed at the beginning of Process A when the cost of the same is Rs.5 per kg.

(ii) RXG Ltd. reports the following results for year ended 31st March, 2007.

	(Rs.)
Sales	20,00,000
Variable cost	12,00,000
Fixed cost	5,00,000
Net profit	3,00,000

Construct a Profit-Volume graph and also calculate

- (a) P / V ratio
- (b) Break -even Point
- (c) Margin of safety.

(iii) Calculate the earnings of workers A, B and C under Straight Piece Rate system and Merrick's Multiple Piece Rate system from the following particulars:

Normal Rate per hour	Rs. 5.40
Standard time per unit	1 minute

Output per day is as follows:

Worker A	390 units
Worker B	450 units
Worker C	600 units

Working hours per day are 8.

(3X3= 9 Marks)

Question 5. Answer the following:

(i) Royal Sporting Company has Rs. 50 lakhs in inventory and Rs. 20 lakhs in accounts receivable. Its average daily sales is Rs. 1,00,000. The company's payables deferral period is 30 days. You are required to calculate the length of the company's cash conversion period?

(ii) Calculate return on equity from following data:

Revenue: Rs. 29,261; Net Income: Rs. 4,212; Assets: Rs. 27,987; Shareholders' Equity: Rs. 13,572.

(iii) Calculate the cost of equity capital of H Ltd., whose risk free rate of return equals 10%. The firm's beta equals 1.75 and the return on the market portfolio equals to 15%.

(iv) Ramesh borrowed Rs. 1,00,000 from a bank on a one-year 8% term loan, with interest compounded quarterly. Determine the effective annual interest on the loan?

(v) Anand Toys maintains a separate account for cash disbursement. Total disbursements are Rs. 2,62,500 per month. Administrative and transaction cost of transferring cash to disbursement account is Rs. 25 per transfer. Marketable securities yield is 7.5% per annum. Determine the optimum cash balance according to William J Baumol model.

(5 X 2 = 10 Marks)

Question 6

ABC accompany Ltd has been producing a chemical product by using machine Z for the last two years. Now the management of the company is thinking to replace this machine either by X or by Y machine. The following details are furnished to you:

	Z	X	Y
Book value (Rs.)	1,00,000	-	-
Resale value now (Rs.)	1,10,000	-	-
Purchase price (Rs.)	-	1,80,000	2,00,000
Annual fixed costs (including depreciation)	92,000	1,08,000	1,32,000
Unable funning costs (including labour) per unit	3	1.50	2.50
Production per hour (unit)	8	8	12

You are also provided with the following details:

Selling price per unit	(Rs.) 20
Cost of materials per unit	(Rs.) 10
Annual operating hours	2,000
Working life of each of the three machines (as from now)	5 years

Salvage value of machines Z Rs. 10,000, X Rs. 15,000, Y Rs. 18,000.

The company charges depreciation using straight line method. It is anticipated that an additional cost of Rs. 8,000 per annum would be incurred on special advertising to sell the extra output of machine Y. Assume tax rate of 50% and cost of capital 10%. The present value of Re. 1 to be received at the end of the year at 10% is as under:

Year	1	2	3	4	5
Present value	0.90	0.826	0.751	0.683	0.621

Required: Using NPV method, you are required to analyse the feasibility of the proposal and make recommendations.

(15 Marks)

Question 7

(a) Ram, Arun & Kailash, Chartered Accountants are partners of the Firm Ranka Associates specialising in the areas of internal and corporate audit, taxation and project consultancy. The revenue of the firm is steadily increasing over the years. For the year ending 31.3.95, the partners decided to operate a budgetary control system to monitor the profitability as well as cash movements. To start with, the following forecast of profits was prepared for the first six months:

Ranka Associates
Projected profit Forecasts for the six months ending 30.9.1994

(Figs Rs. 000)

Particulars	April	May	June	July	August	September
Receipts						
Internal/Corporate						
Audit	60	60	60	60	60	60
Taxation	30	45	40	50	40	60
Project Consultancy	30	50	30	40	60	40
Total	120	155	130	150	160	160
Expenses						
Depreciation	10	10	10	10	10	10
Rent	5	5	5	5	5	5
Stipend	15	15	15	15	15	15
Telephone	5	7	8	9	13	15
Office Expenses & Salaries	35	45	50	35	40	42
Training	5	6	4	10	12	13
Travel & Conveyance	10	12	13	14	15	15
Partners & Assistants'						
Salaries	20	30	35	35	40	40
Total	105	130	140	133	150	155
Profit	15	25	(10)	17	10	5

The following additional information is significant:

- Rent is payable in advance on the last day of the previous quarter.
- Stipend will be paid in the same month.
- Telephone will be paid every two months in arrears, (i. e. April and May will be paid in June)
- Office expenses and Salaries will be paid in the following month.
- Travel & Training will be paid in the same month.
- Partners ' and assistants 'salaries will be paid in the following month.
- The firm is planning to invest a sum of Rs. 50, 000 in July for acquiring a computer.
- The firm expects to pay a self assessment tax of Rs. 5, 000 and advance tax of Rs. 15,000 in August.
- The firm is planning to open a branch and spend a sum of Rs. 20, 000 in September in this regard.

Collection of Fees:

- (j) Internal/Corporate Audit fees will be collected in the following month. Taxation: 50% in the same month and 50% in the following month. Consultancy charge is normally received after 2 months.
- (k) The firm's Cash Balance as on July 1st was Rs. 25,000.

You are required to:

- (1) Prepare a Cash Budget for each of the three months, July, August and September.
- (2) Prepare a working capital statement of June and September and work out the closing cash balance through the same.
- (3) Suggest two improvements that could smoothen the cash position as on 30th September.

(9 Marks)

(b) Aries Limited wishes to raise additional finance of Rs. 10 lakhs for meeting its investment plans. It has Rs. 2,10,000 in the form of retained earnings available for investment purposes. The following are the further details:

- | | |
|--------------------------------------|------------------|
| (1) Debt/equity mix | 30%: 70% |
| (2) Cost of debt | |
| upto Rs. 1,80,000 | 10% (before tax) |
| beyond Rs. 1,80,000 | 16% (before tax) |
| (3) Earnings per share | Rs. 4 |
| (4) Dividend pay out | 50% of earnings |
| (5) Expected growth rate in dividend | 10% |
| (6) Current market price per share | Rs. 44 |
| (7) Tax rate | 50% |

You are required:

- (a) To determine the pattern for raising the additional finance.
- (b) To determine the post-tax average cost of additional debt.
- (c) To determine the cost of retained earnings and cost of equity, and
- (d) Compute the overall -weighted average after tax cost of additional Finance.

(7 Marks)

Question 8 Write short notes on the following:

- (a) William J. Baumal versus Miller-Orr Cash Management
- (b) Trading on Equity.
- (c) Net Income Approach and Net Operating Income Approach to Capital Structure.

(3X 3= 9 Marks)