

MANAGEMENT ACCOUNTING
Module "F" Paper F-18

(MARKS 100)
(3 hours)

Q.1(a) Distinguish between the sales value at split-off method and estimated net realizable value method of allocating joint costs. **(04)**

(b) Give three reasons why the sales value at split-off point method is preferred for allocating joint costs. **(03)**

(c) ABC Ltd. produces two joint products, COCO and SODA. A further product, CRUST, is also made as a by-product of one of the processes for making SODA. Each product is sold in bottles of one litre capacity.

It is now December 2002. You are a cost accountant for ABC Ltd. You have been instructed to allocate the company's joint costs for the year October 2001 to September 2002 between COCO and SODA, but not to the by-product CRUST.

During the year, 2 million litres of a raw material, Neckter, costing Rs 3 million were processed in Department Alpha with no wastage. The processing costs were Rs 1.675 million.

50% of the output of Department Alpha was unfinished COCO, for which there was no external market. It was transferred to Department Beta, where it was further processed at an additional cost of Rs 8.1 million. Normal wastage by evaporation was 16% of the input of unfinished COCO. The remaining good output of finished COCO was sold for Rs 10 per litre in the outside market.

The other 50% of the output from the joint process in Department Alpha was in the form of processed Neckter. It was all transferred to Department Gamma, as there was no outside market for processed Neckter. In Department Gamma it was further processed, with no wastage, at cost of Rs 30.9 million.

72% of the output of Department Gamma was in the form of unfinished SODA, for which there was no external market. It was transferred to Department Delta, where it was subjected to a finishing process at a further cost of Rs 719,000. Normal spoilage of 16 2/3% of the input to the finishing process was observed. The spoiled material was disposed off without charge, as effluent. The remaining finished SODA was sold in the outside market for Rs 60 per litre.

The remaining 28% of the output of Department Gamma was in the form of finished CRUST, the by-product. It was sold in outside market for Rs 8 per litre, but due to its dangerous nature special delivery costs of Rs 70,000 were incurred in respect of it.

Required:

- i. To allocate the appropriate joint costs between COCO and SODA on the basis of relative sales value, treating net realizable value of CRUST as an addition to the sales value of SODA. **(06)**
- ii. To prepare a statement showing profit or loss attributed to each of three products and the total profit or loss for the year on basis of the information above and allocating joint

(2)

- iii. To show with reasons whether ABC Ltd. should continue to produce products in the year October 2002 to September 2003 assuming that input relationships, prices and sales volume do not change. (02)

Q.2 Wahid is a builder. His business will have spare capacity over the coming six months. He is tendering for a school extension contract. Normally he prices a contract by adding 100% to direct costs to cover overheads and profit. He calculates direct costs as the actual cost of materials valued on a first-in-first-out basis, plus the estimated wages of direct labour. But for this contract he has prepared more detailed information. Four types of material will be needed:

Material	Quantity (units)		Price per unit		
	Needed for contract	Already in stock	Purchase price of units in stock	Current purchase price	Current resale price
	Rupees	Rupees	Rupees	Rupees	Rupees
Z	1,100	100	7.00	10.00	8.00
Y	150	200	40.00	44.00	38.00
X	600	300	35.00	33.00	25.00
W	200	400	20.00	21.00	10.00

Z and Y are in regular use. Neither X nor W is currently used. X has no foreseeable use in the business, but W could be used on other jobs in place of material currently costing Rs16 per unit.

The contract will last for six months and requires two craftsmen, whose basic annual wage cost is Rs 16,000 each. To complete the contract in time it will also be necessary to pay them a bonus of Rs 700 each. Without the contract they would be retained at their normal pay rates, doing work that will otherwise be done by temporary workers engaged for the contract period at a total cost of Rs 11,800.

Three casual labourers would also be employed specifically for the contract at a cost of Rs 4,000 each.

The contract will require two types of equipment: general- purpose equipment already owned by Wahid which will be retained at the end of contract and specialized equipment to be purchased second-hand, which will be sold at the end of the contract.

The general - purpose equipment cost Rs 21,000 two years ago and is being depreciated on straight line basis over seven years life (with assumed zero scrap value). Equivalent new equipment can be purchased currently for Rs 49,000. Second-hand prices for comparable general-purpose equipment, and those for the relevant specialized equipment are shown below:

	General-purpose equipment		Specialized equipment	
	Purchase price	Resale price	Purchase price	Resale price
	Rupees	Rupees	Rupees	Rupees
Current	20,000	17,200	9,000	7,400
After 6 months				
if used for 6 months	15,000	12,600	7,000	5,800
if not used	19,000	16,400	8,000	6,500

(3)

The contract will require use of a yard on which Wahid has a four-year lease at a rental of Rs 2,000 per year. If Wahid does not get the contract the yard will remain empty. The contract will also incur administrative expenses estimated at Rs 2,000. The cost of his supervision time can be ignored.

Required: Calculate:

- (a) the price at which Wahid would tender for the school extension contract if he used his normal pricing method, (03)
- (b) the price at which you consider Wahid would neither gain nor lose by taking the contract. (07)

Q.3 JL International Ltd has a number of divisions, each of which may purchase from or sell to, the other. Transfer prices are based on market price, so whether a division sells internally or externally the same price is applicable. One of the major products in the company, Jayell, is one which is processed in Division J and is finished in Division L. Division J sells a considerable part of the output to Division L but it also has a large external market. Division L sells all the finished output of JL to external markets.

In respect of Jayell, the standard marginal costs are as follows:

	DIVISION "J"	DIVISION "L"
	Rupees	Rupees
Direct materials	40	100
Direct wages	30	40
Variable overhead	10	10

Fixed costs budgeted for the year are: 600,000 400,000

Budgeted sales for the year are:

Division J:

Internal 20,000 units at Rs 100 each

External 30,000 units at Rs100 each

Division L:

External 20,000 units at Rs 200 each

Required: Analyze the following:

a)The manager of Division L is asked by the sales manager of Supreme Ltd. to quote for a special order for Jayell. This order will be on a long-term basis of 5,000 units per annum based on a special price of Rs140 per unit. It is not expected that these additional sales to Supreme Ltd will affect the company's sales market because Supreme Ltd plans to sell the product under its own brand name in a country in which JL does not operate.

There is sufficient capacity available in both divisions to undertake this contract if management makes a decision to sell to Supreme Ltd. Based on the above data, would the manager of Division L be advised to accept the offer if the division is autonomous? Would the decision be in the best interest of the company as a whole? (07)

b)The manager of Division L has been offered a contract to buy products from Fine Ltd at a price of Rs 90. He has asked the manager of Division J to reduce his transfer price from Rs 100 to Rs 85. The manager of Division J feels that he is unwilling to accept this price.

(4)

Q.4 It is currently December 2002. KL Limited is a privately owned manufacturer of equipment. Information about the company is as follows.

- (a) The business is growing modestly at present but faster growth is planned.
- (b) The business is seasonal with sales peaking in the autumn.
- (c) KL Limited is anticipating cash flow problems as a result of its planned growth. It has prepared a cash budget for the year 2003, details of which are given below.
 - (i) The bank charges a return of 12% p.a. on its running finance facility that is restricted to a maximum amount of Rs 300 million at any point of time.
 - (ii) The company has 15 shareholders at present; four of the shareholders are directors of the company, owning 60% of the share capital between them. The other shareholders take no interest in the running of the business.
 - (iii) None of the director-shareholders will be in a position to invest capital in the business for the next 2 to 3 years.

Cashflow forecast for the year 2003 (Rs'000)

	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
Receipts from customers	175	135	115	75	50	50	65	75	90	150	215	295	1,490
Other income			45			45			45			45	180
Total inflow	175	135	160	75	50	95	65	75	135	150	215	340	1,670
Payments to trade supplies	52	41	34	23	15	15	20	22	27	53	75	103	480
Wages / salaries	53	53	53	53	55	57	57	55	55	53	53	53	650
Other operating expenses	25	25	25	30	30	30	35	35	35	35	35	40	380
Capital expenditure			45			35			40				120
Dividend payable		100											100
Tax payable									65				65
Total outflow	130	219	157	106	100	137	112	112	222	141	163	196	1,795
Net cash inflow/(outflow)	45	(84)	3	(31)	(50)	(42)	(47)	(37)	(87)	9	52	144	(125)
Opening bank balance	50	95	11	14	(17)	(67)	(109)	(156)	(193)	(280)	(271)	(219)	50
Closing bank balance	95	11	14	(17)	(67)	(109)	(156)	(193)	(280)	(271)	(219)	(75)	(75)

The following information is also available.

- (a) All sales are on credit. The company's usual terms of trade allow 60 days' credit. Customers take, on average, 90 days to pay. This has been allowed for in the cash budget. Sales in the three months to the end of December 2003 are expected to be Rs 660,000. No increases in selling prices are planned.
- (b) Production is evenly scheduled throughout the year and finished goods for stock are stored until the peak selling period. The company estimates stocks of finished goods will be Rs 170,000 higher at the end of December 2003 than at the beginning of the year.
- (c) The company's premises are all owned by the company. Other income is rental from letting some of its premises.
- (d) Suppliers, on average, allow KL Limited 6 weeks' credit although the company typically takes up to 90 days to pay. Purchases for the three months to the end of December 2003 are expected to be Rs 231,000. All other expenses are paid in the month in which they arise.

(5)

Required:

Calculate the profit before tax excluding depreciation of the company for the year 2003.
Use whatever reasonable assumptions you think necessary, but state, briefly, what they are.

(10)

- Q.5 (a) What are the circumstances that create risk of fraud in an organization? (02)
(b) What steps would you suggest that management of an organization should take for prevention of fraud? (06)
- Q.6 (a) Briefly discuss the Balanced Scorecard Theory for measuring performance and the four important perspectives for performance evaluation. (08)
(b) Briefly discuss the principles and advantages of Zero Base Budgeting. (04)
- Q.7 (a) A company sells a product at Rs 30 per unit with variable costs at Rs 20 per unit while the fixed costs of the company amount to Rs 625,000. The total annual sales amount to Rs 7.5 million.
It is estimated that if the present credit facility of one month were doubled, sales could be increased by Rs 600,000 per annum. The company expects a return on investment of at least 20 per cent prior to taxation.
Should the extended credit facility to debtors be allowed? (08)
- (b) If the information as given in (a) above is used then it may be assumed that an additional overseas order may be accepted allowing a greater sales price of Rs 40/= without the possibility of spoiling the home market. Ten thousand extra units could be sold but additional costs on the order would amount to Rs 300, while the risk of a bad debt is estimated at 0.25. Also credit would have to be extended to the customers to 90 days. Should the order be accepted? (04)
- Q.8 Usman Ltd. is a company whose objective is to maximize profits. It manufactures two speciality chemical powders, gamma and delta, using three processes: heating, refining and blending. The powders can be produced and sold in infinitely divisible quantities.

The following are the estimated production hours for each process per kilo of output for each of the two chemical powders during the period 1 January 2003 to 31 March 2003:

	Gamma (hours)	Delta (hours)
Heating	400	120
Refining	100	90
Blending	100	250

During the same period, revenues and costs per kilo of output are budgeted as

	Gamma (Rs. per kilo)	Delta (Rs. per kilo)
Selling price	16,000	25,000
Variable costs	12,000	17,000
Contribution	4,000	8,000

(6)

It is anticipated that the company will be able to sell all it can produce at the above prices, and that at any level of output fixed costs for the three month period will total Rs.36,000.

The company's management accountant is under the impression that there will only be one scarce factor during the budget period, namely blending hours, which cannot exceed a total of 1,050 hours during the period 1 January 2003 to 31 March 2003. He therefore correctly draws up an optimum production plan on this basis.

However, when the factory manager sees the figures he points out that over the three month period there will not only be a restriction on blending hours, but in addition the heating and refining hours cannot exceed 1,200 and 450 respectively during the three month period.

Required:

- (a) Calculate the initial production plan for the period 1 January 2003 to 31 March 2003 as prepared by the management accountant, assuming blending hours are the only scarce factor. Indicate the budgeted profit or loss, and explain why the solution is the optimum; (04)
- (b) Calculate the optimum production plan for the period 1 January 2003 to 31 March 2003, allowing for both the constrain on blending hours and the additional restrictions identified by the factory manager, and indicate the budgeted profit or loss. (08)
- (c) State the implications of your answer in (b) in terms of the decisions that will have to be made by Usman Ltd. With respect to production during the period 1 January 2003 to 31 March 2003 after taking into account all relevant costs. (02)

(THE END)