THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Final Examinations Winter 2008

December 2, 2008

MANAGEMENT ACCOUNTING

(MARKS 100)
(3 hours)

Q.1 A division of Electronic Appliances Limited sold 6,000 units of refrigerators during the year ended September 30, 2008, the sale price being Rs. 24,000 per unit.

The opening work in progress comprised of 500 units which were complete as regards material but only 40% complete as to labour and overheads. The closing work in progress comprised of 1200 units which were also complete as regards material but only 50% complete as to labour and overheads. The finished goods inventory was 800 units at the beginning of the year and 1000 units at the year end.

The work in progress account had been debited during the year with the following costs:

	Rs. in '000'
Direct material	83,490
Direct labour	14,256
Variable overheads	10,890
Fixed overheads	17,490

As compared to the previous year, the costs per units have increased as follows:

Direct material	10%
Direct labour	8%
Variable overheads	10%
Fixed overheads	6%

The selling and administration costs for the year were :

	Rupees
Variable cost per unit sold	1,600
Fixed costs	12,000,000

Required:
(a) Compute the cost per unit, by element of cost and in total, assuming FIFO basis.
(b) Prepare profit statements on the basis of:
  (i) Absorption costing
  (ii) Marginal costing. **(20)**

Q.2 RF Ltd. has established a new division. The total cost of the property, plant and equipment of the division is Rs. 500 million. The working capital requirements are expected to average Rs. 100 million. The company plans to finance the division maintaining a debt equity ratio of 70:30. The cost of debt is 10%.

Other relevant information is as under:

Annual profit before depreciation and financial charges	Rs. 150 million
Life of the assets	10 years
Deprecation method	Straight line

The residual value of the property, plant and equipment is estimated at Rs. 20 million. The division will start functioning from 1st January, 2009.

Required:

(a) Compute the return on investment (ROI) on the basis of average net assets employed by the division for the years 2009 and 2015. **(08)**

(b) Based on the results obtained above, discuss the limitations of ROI as a measure of performance. **(02)**

Q.3 ABC Limited is considering to set up a chemical plant to produce a specialized chemical CP-316. Their technical consultants have examined various plants and have recommended to install either Model A or Model Z for the project. The specifications of the plants are as follows:

	MODEL A	**MODEL Z**
Per hour capacity	80 kgs	100 kgs
Plant cost including installation	Rs. 660 million	Rs. 750 million
Natural gas consumption	0.5 MMBTU / kg	0.4 MMBTU / kg
Electricity consumption	2 KWH/ kg	1.5 KWH / kg
Water consumption	5 gallons / kg	4 gallons / kg
Normal evaporation losses	15% of the input	10% of the final production
Annual operating capacity	7,500 hours	7,500 hours
Life of plant	20 years	20 years

The marketing research has indicated that there is a large gap between demand and supply and the company can market at least one thousand tons annually.

Other relevant information is as follows:

(i)

	Rupees
Sale value per kg	900
Cost of raw material per kg	400
Electricity per KWH	12
Natural gas per MMBTU	80
Water per gallon	2

(ii) Other expenses at a capacity of 600 tons are as under:

	Model A	**Model Z**
	Rupees in million	
Direct labour	30.0	33.0
Other production overheads (60% variable)	60.0	70.0
Selling and administration (40% variable)	35.0	45.0

Production overheads include depreciation charged on straight line basis.

(iii) Working capital requirements are estimated at 20% of annual sales.
(iv) Debt equity ratio of 60:40 will be maintained by the company.
(v) Financial charges would be 12%.
(vi) Tax rate applicable to the company is 30%.

Required:

Prepare detailed working to conclude whether the company should purchase Model A or Model Z. **(16)**

Q.4 (a) XYZ Ltd. produces a single product which has a large market. It sells an average of 360,000 units per month at a price of Rs.160 per unit. The variable cost is Rs.120 per unit.

All sales are made on credit. Debtors are allowed one month to clear off the dues. The company is thinking of extending the credit term to two months which will help increase the sale by 25%.

Other information is as follows:

(i) Raw materials constitute 60% of the variable cost.

(ii) The company has a policy of maintaining 60 days stock of finished goods and 30 days stock of raw materials. The suppliers of raw materials allow a credit of 20 days.

(iii) The company's cost of funds is 16%.

Required:
Calculate the effect of the proposed credit policy on the profitability of the company. **(10)**

(b) FGH Ltd. needs financing for its short term requirements. A factor has offered to advance 80% of the credit bills for a fee of 2% per month plus a commission of 4% on its trade debts which presently amount to Rs. 8 million. FGH allows a credit of 20 days to all customers. It has estimated that it can save Rs. 600,000 per annum in Management costs and avoid bad debts to the extent of 1% on the credit sales.

The company is also negotiating with a bank which has offered short term loan at 18% per annum. Further, a one time processing fee of 3% will have to be paid.

Required:
Advise the company on the preferred mode of financing, assuming that the financing is required for one year only. **(05)**

Q.5 EEZ Limited produces a variety of electronic items including flat screen television sets. All the components are imported and are assembled by a team of highly skilled technicians. There are 10 employees working in this team, who work 5 days per week and 8 hours per day. Overtime is paid at double the normal rate.

A new model is produced each year. The production is carried out in batches. The efficiency of the technicians improves with each batch but a study has not been carried out yet to determine the extent of learning curve effect. Each batch consists of 40 units. So far, 4 batches have been completed. The first batch required 800 direct labour hours including overtime of 200 hours. A total of 2,312 hours have been recorded so far.

The company uses standard absorption costing. The following costs were recorded for the initial batch:

	Rupees
Direct materials	400,000
Direct labour including overtime	800,000
Special tools (Re-usable) costing	50,000
Variable overheads (per labour hour)	500
Fixed overheads (per week)	25,000

The company has been asked to bid for an order of 480 units. The order is required to be completed in 10 weeks. Due to strong competition prevailing in the market, the marketing director believes that the quotation is unlikely to be accepted if it exceeds Rs. 25,000 per unit. Moreover, if the order is not accepted, only 8 of the employees will be employed elsewhere whereas 2 employees will remain idle for the next 6 weeks.

Required:
Recommend whether it is worth accepting this order at Rs. 25,000 per unit. **(17)**

Q.6 RS Enterprises is a family concern headed by Mr. Rameez. It is engaged in manufacturing of a single product but under two brand names i.e. A and B. Brand B is of high quality and over the past many years, the company has been charging a 60% higher price as compared to brand A.

As the company has progressed, Mr. Rameez has felt the need for better planning and control. He has compiled the following data pertaining to the year ended November 30, 2008:

	Rupees	Rupees
Sales		5,522,400
Production costs:		
Raw materials	2,310,000	
Direct labour	777,600	
Overheads	630,000	3,717,600
Gross profit		1,804,800
Selling and administration expenses		800,000
		1,004,800

	A	B
No. of units sold	5400	3600
Labour hours required per unit	5	6

Other information is as follows:

(i) 20% of B was sold to a corporate buyer who was given a discount of 10%. The buyer has agreed to double the purchases in 2009 and Mr. Rameez has agreed to increase the discount to 15%.

(ii) In view of better margins in B, Mr. Rameez has decided to promote its sale at a cost of Rs. 250,000. As a result, its sales to customers other than the corporate customer, are expected to increase by 30%. However, the production capacity is limited. He intends to reduce the production/sale of A if necessary. Mr. Rameez has ascertained that 90% capacity was utilized during the year ended November 30, 2008 whereas the time required to produce one unit of B is 20% more than the time required to produce a unit of A.

(iii) 2.4 kgs of the same raw material is used for both brands but the process of manufacturing B is slightly complex and 10% of all raw material is wasted in the process. Wastage in processing A is 4%.

(iv) The price of raw material have remained the same for the past many years. However, the supplier has indicated that the price will be increased by 10% with effect from March 1, 2009.

(v) Direct labour per hour is expected to increase by 15%.

(vi) 40% of production overheads are fixed. These are expected to increase by 5%. Variable overheads per unit of B are twice the variable overheads per unit of A. For 2009, the effect of inflation on variable overheads is estimated at 10%.

(vii) Selling and administration expenses (excluding the cost of promotional campaign on B) are expected to increase by 10%.

Required:
Prepare a profit forecast statement for the year ending November 30, 2009. **(22)**

(THE END)