

**THE OPEN UNIVERSITY OF SRI LANKA**  
**FACULTY OF ENGINEERING TECHNOLOGY**  
**POSTGRADUATE DIPLOMA IN TECHNOLOGY IN INDUSTRIAL ENGINEERING - LEVEL 7**  
**FINAL EXAMINATION - 2009/2010**

**MEM 7213- INDUSTRIAL ECONOMICS AND FINANCIAL ACCOUNTS**

**DATE : 14 March 2010**

**TIME : 0930 hrs - 1230 hrs**

**DURATION: Three (03) hours**



**Answer three (03) questions from PART A including question 01 and two (02) questions from PART B.**

**PART A**

**Q1)**

The authorized capital of ABC Ltd is Rs. 85,000,000/- which consists of 700,000, 5% redeemable preference shares of Rs. 50/-each and 1,000,000 ordinary shares of Rs.50/-each. Company has issued only 500,000 redeemable preference shares and 700,000 ordinary shares to the public.

The Trail balance of ABC Company Ltd as at 31<sup>st</sup> March 2009 has been given below

Balances	Dr(000)	Cr(000)
Debtor/ creditor	38,000	23,000
Directors' salaries	1,500	
10% Debentures (issued on 1.1.2007)		20,000
Bad debts	5,000	
Advertising	5,500	
Commission paid/ Received	3,250	8,210
Stock as at 31.03.2009	8,000	
Employees' Salaries	7,500	
Preliminary expenses	3,500	
Cash & Bank	14,000	
Land & Building/ Accumulated Deprecation as at 1.4.2008	100,000	30,000
Furniture and Fittings/ Accumulated Deprecation as at 1.4.2008	70,000	20,000
Packaging	5,500	
Audit fees	1,250	
Trading profit		165,000
Patent and right	5,000	
Insurance	6,500	
General reserve		25,000
Interest paid on Debentures	1,800	
Discount paid/ Received	700	1,000
Good will	15,000	
Bank charges	1,225	
Telephone	6,000	
12% Unquoted investment	28,000	
10% Quoted investment	32,000	

Investment income received-Unquoted		2,300
Investment income received-Quoted		2,800
Ordinary share capital		35,000
Preference share capital of 5%		25,000
Tax paid for the assessment year 08/09	3,000	
P&L balance as at 1/4/2008		4,915
	362,225	362,225

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The following information is also available

- On 1<sup>st</sup> of July 2008, a one year contract was made with a private media institution for telecasting advertisements of ABC Ltd. Total value of the contract was Rs.600,000/=.
- Among the total debtors in the trial balance, Rs.350, 000/= became bad debts and in the remaining amount 8 % was to be reserved as provision for doubtful debts.
- The company depreciates their non current assets as follows.
  - Building at 5 % on the straight line method (Cost value of land shown in the balance sheet was Rs. 20,000,000/=)
  - Furniture and fittings at 10 % on reducing balance method.
- There were advance payments and areas in insurance and telephone at the amounts of Rs.300, 000/= and Rs.500, 000/= respectively on 31/03/2009.
- Income tax totally payable for the year of assessment 2008/2009 was estimated as Rs.4, 500,000/=.
- In packaging materials, materials worth Rs.250, 000/= can be used for next financial year.
- Both quoted and unquoted investments listed in the balance sheet were made on 01.07.2007.
- Board of directors decided to make following adjustments at the end of financial year.
  - 1) To write off 50 % in patent and right and 25 % of preliminary expenses.
  - 2) To increase the value of general reserve by 40 %.
  - 3) To declare dividend of 8 % on ordinary share capital and dividend for preference shares as determined earlier.

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You are required to prepare following to be submitted to the Board of Directors.

- Profit and loss account of ABC Company Ltd for the year ending 31<sup>st</sup> March 2009.
- Balance sheet of ABC Company Ltd as at 31<sup>st</sup> March 2009. (30 Marks)

**Q2)****Part 1**

Luma Company produces jam bottles to the export market. They have estimated following cost details to their jam manufacture for the year ending on 31.12.2010.

Total bottles budgeted to be sold— 58,000 at Rs.130/= per bottle.

Variable cost per bottle- Rs.80/=

Total fixed cost- Rs.1, 200,000/=

Find the following

1. Contribution to sales (C/S) ratio
2. Break Event Point (BEP) in sales amount (Rs.) and in unit sales.
3. Margin of safety in units and in sales revenue (Rs).
4. Profit earned when the unit sold stands at 45,000
5. Additional units to be sold to earn a profit of Rs. 2.5 million. (10 marks)

**Part 11**

From the following forecasted income and expenditure, prepare a cash budget for three months from April to June 2010.

	Sales	Purchases	Wages	Admin	Selling
February	62,000	48,000	4,200	4,200	8,000
March	80,000	56,000	5,100	3,800	10,600
April	82,000	60,000	3,500	5,600	12,200
May	90,000	64,000	4,400	6,800	14,600
June	85,000	66,000	3,600	5,400	15,000

Consider the following information.

- All purchases will be made on credit and in sales, 50% will be made on cash basis and the rest will be on credit. Two months credit period will be allowed to debtors and one month will be allowed by creditors.
- A vehicle is expected to be sold at Rs.45000/= in the month of May.
- Mid year bonus of Rs.6800/= is payable to the employees in every June.
- Administration expenses will be settled one month after the expenses incur.
- Wages and selling expenses will be paid in the month it incurs.
- The bank balance as on 1<sup>st</sup> of April 2010 will be estimated to be Rs.3000/=.

(10 Marks)

Q3)

**Part 1**

Milan Bakers produce and market cakes. They accept several orders. Their production process is undertaken in three departments; mixing, baking and packing. The estimated cost details for job No 457; an order for specific cake is furnished below.

**Material to be used**

Flour – 50 Kg of Rs.70/= each.

Sugar – 32 Kg of Rs.102/= each.

In addition 10 Kg of other minor ingredients each priced at Rs. 75/= also will be used.

**Labor hours to be worked**

Labor usage for job no 547 at three departments will be as follows.

Mixing Department -30 hours @ wage rate of Rs.22/= per hour

Baking Department-28 hours @ wage rate of Rs.38/= per hour

Packing Department-15 hours @ wage rate of Rs.25/= per hour

Total Variable Overheads absorbed and total hours worked in each department on job no 457 will be as follows

Department	Total Overhead in Rs	Total hours worked
Mixing	87,500	17,500
Baking	147,000	24,500
Packing	50,400	12,600

In addition Milan Bakers will incur administration expenses of Rs.5000 on Job no 457.

They will add the profit margin of 35 % on the total cost.

Find out the following.

- The total cost of the job no 457
- The price to be charged from the job no 457.
- If the cake ordered in job no 457, can be cut in to 800 pieces, find out the price of a piece of cake. (15 marks)

**Part 11****Answer the following questions**

- Discuss the benefits of maintaining management accounting systems in organizations.
- How can you differentiate job costing from process costing? Explain with examples. (05 marks)

Q4)

Amal, Bala and Camel have been running a partnership business. On 31<sup>st</sup> March 2009 their balance sheet was as follows.

<u>Capital Accounts</u>		<u>Non Current Assets</u>	
	Rs.		Rs.
Amal	300,000	Land & Buildings	780,000
Bala	300,000	Furniture & Fittings	<u>250,000</u>
Camel	<u>300,000</u>		1030,000
	900,000	Goodwill	120,000
Net profit	130,000		
<u>Current Accounts</u>		<u>Current Assets</u>	
	Rs.		
Amal	25,000	Stock	30,000
Bala	32,000	Trade Debtors	42,000
Camal	<u>(12,000)</u>	Cash	25,000
	45000		
10% Bank Loan	120,000		
<u>Current Liabilities</u>			
Trade Creditors	30,000		
Bills payable	22,000		
	<u>1,247,000</u>		<u>1,247,000</u>

After profit was determined from profit and loss account, it was directly transferred to balance sheet without incorporating following adjustments and appropriation among the partners.

- Bank loan mentioned in the balance sheet was received on 1<sup>st</sup> of October 2008, but interest on this loan was not paid since the loan was received.
- Monthly salary of Rs.2500/= paid to the servant of Mr. Bala for 3 months from 1<sup>st</sup> January 2009 to 31<sup>st</sup> March 2009 has been included in partnership accounts.
- Personal telephone bill of Mr. Amal at Rs.7500/= was settled from the cash available in partnership business.
- In debtors Rs. 4,000/= became bad debts. It was not recorded in the books as yet.
- Entries for clauses in partnership agreement were not made as yet.

**Partnership agreement:**

- Profit and losses should be shared among Amal, Bala and Camel equally.
- Partners are entitled for an annual interest of 10 % on year end capital account balances.
- Partners will be given an interest of 5 % on the loans provided to the partnership business.
- Mr. Amal and Mr. Bala are managing the business, therefore they are entitled to get a monthly salary of Rs. 4,000/- and Rs. 3,500/- respectively.
- When a new partner is admitted in to partnership business, agreement of all partners must be sought.

You are required to prepare the following for the partnership business of Amal, Bala and Camel.

- Adjusted profit and lost account for the year ending 31/03/2009
- Profit and loss appropriation account for the year ending 31/03/2009
- Partners Current account as on 31/03/2009
- Balance sheet as at 31/03/2009

(20 Marks)

**PART B**

- Q5) (a) Differentiate the following.
- (i) Variable and Fixed factors of production
  - (ii) Short and Long run production
- (b) Using illustrations, explain how the Total product, Average and Marginal product change when increasing quantities of Labour is added to the fixed Capital in a production process.

- (c) Using illustrations, explain the following.
- (i) Marginal Rate of Technical Substitutions. (MRTS)
  - (ii) Increasing, Decreasing and Constant Returns to Scale. (15 Marks)
- Q6** (a) Can the firms operate in a Perfectly Competitive market determine price? Explain using illustrations.
- (b) Using illustrations, explain the following situations faced by a firm operating in a Perfectly Competitive market.
- (i) Firm earning super normal profit.
  - (ii) Firm running at a loss.
- (d) "Kinked demand curve theory of Oligopoly prices, attempts to explain the rigidity of prices in these markets" Do you agree? Explain using illustrations. (15 Marks)
- Q7** (a) (i) What are the Macro Economic goals of a country?
- (ii) "In reality all the Macro goals can not be achieved at the same time" Do you agree? Explain.
- (b) (i) What are the methods of measuring the National Output?
- (ii) What are the factors that make the National Output estimate inaccurate? Explain. (15 Marks)