



095

**UNIVERSITY OF RUHUNA**  
**FACULTY OF MANAGEMENT AND FINANCE**  
**Bachelor of Business Administration Degree Program 2000 Level Semester I**  
**End Examination November/December 2021**  
**Academic Year 2020/2021**  
**BBA 21013 – Cost and Management Accounting**      **Duration: Three hours**  
**The Question Paper contains six (06) questions.**  
**Answers five (05) questions only.**  
**Calculators are allowed.**

**Question No. 01**

- A. Cost can be classified in several different ways. Briefly explain two different ways of cost classification. (02 Marks)
- B. Briefly explain two differentiates between Cost Accounting and Financial Accounting. (01 Mark)
- C. The following information relates to the manufacturing of a product in the month of November 2021.

Output (Units)	Total cost (Rs.)
1,600	350,000
2,400	400,000
3,200	430,000

For output volumes above 3,000 units, the variable cost per unit falls by 10%.

**Required:**

Estimate the total cost of producing 2,000 units and 4,000 units of the product in the month of November 2021.

(02 Marks)

- D. Banuka Company uses components at the rate of 200,000 units per year, which are bought in at a cost of Rs. 60 each. The order cost per order is Rs.3,000. The holding cost is 20% of purchase price per annum of the average inventory held.

**Required:**

Calculate the Economic Order Quantity (EOQ) and annual total inventory cost.

(02 Marks)

- E. Budgeted production in a factory for the month of December 2021 is 20,000 units. Each unit requires 05 labour hours. Labour is paid Rs. 150 per hour. Idle time represents 20% of the total labour time.

**Required:**

Calculate the total budgeted labour cost for the next month.

(02 Marks)

- F. Asalanka Company produces a product using two production departments and two service departments. Budgeted costs are as follows:

Cost	Rs.'000
Rent	4,000
Rates	2,000
Electricity charges	6,000
Insurance for machineries	2,000
Depreciation for machineries	20,000
Supervisor' salaries	14,000

The following additional information is available:

	Production Departments		Service Departments	
	A	B	X	Y
Areas (square feet)	1,800	1,560	440	200
Value of machineries (Rs. Million)	100	78	12	10
Number of employees	700	450	150	100

It has been estimated that each service cost center does work for the other cost centers in the following proportions.

	A	B	X	Y
Percentage of service cost center X to:	50	30	-	20
Percentage of service cost center Y to:	40	50	10	-

After the reapportionment of service cost center costs, the cost has been carried out using a method that fully recognizes the reciprocal service arrangements in the factory.

**Required:**

Calculate the total overhead cost of production cost centers using mathematical method for reapportionment of service cost centers' costs.

(05 Marks)

(Total Marks 14)

**Question No. 02**

A. Charith Company produces three products, A, B and C. Until now, it has used Traditional Absorption Costing to allocate overheads to its products. The Company is now considering an Activity Based Costing system in the hope that it will improve profitability. The budgeted direct cost per unit and selling price per unit and sales volume of the three products are shown below.

	A	B	C
Production and sales volume (units)	20,000	15,000	25,000
Profit mark-up on total cost	30%	25%	20%
Total direct cost per unit (Rs.)	40	60	80

The annual overhead costs were as follows:

Cost pools (Activities)	Cost drivers	Costs (Rs.)
Machine running	Machine hours	510,000
Machine set up	Number of production runs	540,000
Purchasing	Number of purchase orders	360,000
Deliveries	Number of deliveries	420,000

The following additional information relate to each product,

	A	B	C
Required machine hours to produce one unit	1.2	1.4	1.6
Number of productions runs per annum	12	09	06
Number of purchase orders per annum	18	21	33
Number of deliveries to retailers per annum	36	22	47

**Required:**

Calculate the total production cost and total profit for each product using Activity-Based Costing (ABC).

(09 Marks)

B. Pathum Company makes and sells one product. The following information is available for the month of November 2021.

	Units
Opening inventory	1,200
Production	7,500
Sales	6,900

Selling price per unit and cost per unit are given below.

	Rs.
Selling price	640
Direct material cost	104
Direct labour cost	120
Variable production overheads cost	88
Variable selling overheads cost	24
Fixed production overheads cost	200

Fixed production overhead costs for the month were Rs.1.6 million and fixed selling overhead costs were Rs. 400,000.

**Required:**

Prepare the absorption costing income statements for the month of November 2021.

(05 Marks)

(Total Marks 14)

**Question No. 03**

A. "The nature of process costing is such that processes often produce more than one product. These additional products may be described as either joint products or by-products."

Briefly explain joint products and by products.

(02 Marks)

B. Asalanka Company produces a product through the three-manufacturing process and the information related to the second process for the month of November 2021 is as follows.

Input from process 1	5,000 units @ Rs.138.96
Raw materials added	Rs.543,600
Labour cost	Rs.392,400
Production overheads cost	Rs.249,600
Actual loss	800 units

Work in progress at the beginning of the month (OWIP) and ending of the month (CWIP) were 600 units & 1,000 units, respectively. Those were completed as follows.

	<i>OWIP</i>	<i>Cost of OWIP (Rs.)</i>	<i>CWIP</i>
Raw materials transferred from process 1	100%	105,420	100%
Raw materials added	60%	28,530	75%
Labour cost	30%	29,820	40%
Production overheads cost	30%	10,800	20%

Normal loss is 10% of active units and scraps can be sold at Rs.30 per unit.

**Required:**

Prepare the process 2 account and other relevant accounts under the weighted average cost (WAC) methods.

(12 Marks)  
(Total Marks 14)

**Question No. 04**

- A. "Standard cost is the planned unit cost of a product or service. Further standard cost is predetermining cost agreed earlier under specified working conditions. It is an indication of what a unit of product or service should cost."

Briefly explain this statement with objectives of standard costing.

(02 Marks)

- B. Rajitha Company manufactures a product in one of its factories and sells to local market. The Company uses the standard absorption costing system and absorbs overheads based on direct labour hours. Budgeted production and sales for the month are 2,000 units. Standard selling price per unit is Rs. 3,000 per unit. Standard cost card per unit of the product is as follows.

	<i>Rs.</i>
Direct material: 10 kgs @ Rs. 100 per kg	1,000
Direct labour: 04 hours @ Rs. 37.50 per hour	150
Variable overhead: 04 hours @ Rs. 25 per hour	100
Fixed overhead: 04 hours @ Rs. 50 per hour	200
Total variable cost per unit	1,450

The actual information recorded for the month of November 2021 are as follows.

Production and sales	1,800 units
Selling price per unit	Rs. 3,250
Direct material	17,800 kg @ Rs. 125 per kg
Direct labour	7,100 hours @ Rs. 50 per hour
Variable overheads cost	Rs.240,000
Fixed overhead cost	Rs. 450,000

**Required:**

- i. Calculate the following variances for the month of November.
  - a. Direct Material Price and Usage variances.
  - b. Direct Labour Rate and Efficiency variances.
  - c. Variable Overhead Expenditure and Efficiency variances.
  - d. Fixed Overhead Expenditure, Capacity and Volume variances
  - e. Sales Price Margin and Volume Margin variances
- ii. Prepare an operating statement reconciling the budgeted contribution with the actual contribution.

(12 Marks)

(Total Marks 14)

**Question No. 05**

- A. Define the term "Profit Volume Ratio" and explain how it can be used for cost volume profit analysis.

(02 Marks)

- B. Mahindananda Company engaged in plantation activities has 500 hectares of virgin land which can be used for growing jointly or individually tea, coffee, and cardamom. The relevant information is given below.

	Tea	Coffee	Cardamom
Yield per hectare of the different crops (kg)	2,000	500	100
Selling price per kg (Rs.)	200	400	2,500
Variable cost per kg (Rs.)	140	130	1,500
Minimum ( <b>Compulsory</b> ) area to be cultivated (hectares)	200	60	20
Maximum area to be cultivated (hectares)	420	100	100
Fixed cost per annum: (Rs.)	40 million		

**Required:**

Calculate the most profitable product mix and the maximum profit which can be achieved.

(04 Marks)

C. Total sales and total profits of Basil Company in respect of two years are as follows.

<i>Year</i>	<i>Sales (Rs.)</i>	<i>Profit (Rs.)</i>
2019/2020	150 million	20 million
2020/2021	200 million	30 million

The selling price per unit, variable cost per unit and fixed cost of the Company were not changed during the last two years.

**Required:**

- i. Calculate Break- Even Point (BEP) in sales value.
- ii. Calculate the required sales value to obtain a profit of Rs. 35 million.
- iii. If sales value of the Company is Rs. 120 million, calculate the total profit.

(04 Marks)

D. Sagara Company manufactures and sells two products "Red" and "Blue". The Company has forecasted the following information for the month of November 2021.

	<i>Red</i>	<i>Blue</i>
Selling price per unit (Rs.)	600	400
Variable cost per unit (Rs.)	300	200
Total fixed costs for the month (Rs.)	4.5 million	

The Company is expected to sell one unit of product Red for every three units of product Blue.

**Required:**

- i. Calculate the weighted average profit volume ratio (Combined PV ratio) based on the expected sales proportion.
- ii. Calculate the Break Even Point of the Company and each product for the month of November 2021 in units.

(04 Marks)

(Total Marks 14)

**Question No. 06**

A. Nanda Company is now trying to ascertain the best pricing policy that they should adopt for the new product's launch into the market. Demand is very responsive to price changes, and research has established that, for every Rs. 30 increase in price, demand would be expected to fall by 1,000 units. If the Company set the price at Rs. 720, only 2,000 units would be demanded. The variable cost per unit is Rs. 150.

**Required:**

- i. Establish the demand function (equation) for new product.
- ii. Calculate the optimum price, optimum output, and total contribution for the period.

(03 Marks)

B. Sena Company forecasted the following information for the next six months start from month of December in the year 2021.

- 50% of the sales are on cash basis and balance 50% of the sales are on credit cards. The Company has to pay 02% commission on credit card sales to the credit card Company. Cash is collected for the credit card sales in the following month. Selling price per unit is Rs.400 and it is expected to increase by 10% from the month of March 2022.

	<i>December 2021</i>	<i>January 2022</i>	<i>February 2022</i>	<i>March 2022</i>	<i>April 2022</i>	<i>May 2022</i>
Sales volume in units	8,000	10,000	10,000	8,000	12,000	10,000

- The variable cost per unit is given below.

	<i>Rs.</i>
Direct material (Rs.15 per kg)	120
Direct labour	80
Variable overhead	40
<b>Total variable cost per unit</b>	<b>240</b>

- The Company is practice has been to purchase 50% direct materials required for budgeted production, one month in advance. A period of one month is allowed for the payment of direct materials by the suppliers and 50% of the next month's sales will be maintained in closing finished goods stock of the previous (this) month.
- Annual total fixed overheads are estimated to be Rs.09 million. Fixed overhead is paid same month and includes monthly depreciation of Rs. 250,000. Fixed overheads are to be charged equally by every month and direct labour cost is paid the same month and variable overheads are to be paid with one-month arrears.
- 15% of the sales should be paid to the Inland Revenue Department being the value added tax. Value added tax liability of each month should be paid on or before the 25<sup>th</sup> of the following month.
- The following are some balances as at 01<sup>st</sup> January 2022.

	<i>Rs.'000</i>		<i>Rs. '000</i>
Trade Creditors	1,000	Accrual value added tax	480
Accrual variable overheads	600	Cash at Bank	2,000

**Required:**

Prepare the cash budget for the months of January, February, and March in the year 2022 on a monthly basis. (Total column not necessary).

(11 Marks)  
(Total Marks 14)