UNIVERSITY OF RUHUNA FACULTY OF MANAGEMENT AND FINANCE	No. of Pages: 09 No. of Questions: 06 Total Marks :70
BACHELOR OF BUSINESS ADMINISTRATION HONOURS DEGREE 2000 LEVEL FIRST SEMESTER END EXAMINATION – AUGUST/SEPTEMBER 2022	*Three Hours*
BBA 21013 – Cost and Management Accounting	Academic Year 2021/2022

Instructions
- Answer five (05) questions only.
- Calculators are allowed.

Question No. 01.

A. "The management accountant continually reviews conventional cost classification and the conventional assumptions regarding cost behavior". Briefly explain.

(02 Marks)

B. Define cost unit, direct cost, indirect cost, and prime cost.

(02 Marks)

C. A Company has the following total costs at three activity levels.

Activity level (Units)	*Total cost (Rs.)*
4,000	440,000
6,000	548,000
7,500	608,000

Variable cost per unit is constant within this activity range and there is a step up of 10% in the total fixed costs when the activity level exceeds 5,500 units.

Required:

Calculate the total cost at an activity level of 5,000 units and 8,000 units.

(02 Marks)

D. A company uses components of 6,000 units of the year, which are bought at a cost of Rs. 12 each from the supplier. It costs Rs. 200 each time to place an order. The supplier offers a 5% discount on the purchase price for order quantities of 2,000 items or more. The holding cost is 20% of purchase per annum of the value of inventory held.

Required:

Decide whether the company should accept the discount or not.

(02 Marks)

E. A Company operates a factory which employed 50 workers throughout the four-week period. Direct employees were paid at a basic rate of Rs. 200 per hour for a 40-hour week. Total direct hours worked in the four-week period were 9,000. Overtime is paid at a premium of 50% to meet general production requirements. Employee deductions total 30% of gross wages. 300 hours of direct workers time were identified as idle.

Required:

Calculate the gross wages, deductions, direct labour cost, and indirect cost for the four-week period.

(02 Marks)

F. A Company has three production departments and two service departments. The following table shows how costs have been allocated and the relative usage of each service department by other departments.

	Production			Service	
	A	B	C	X	Y
Cost (Rs.'000)	80,000	50,000	40,000	11,700	15,000
Proportion: X	30%	30%	30%	-	10%
Proportion: Y	30%	20%	30%	20%	-

Required:

Prepare the overhead analysis sheet for reapportionment by using equation method.

(02 Marks)

G. The following information relates to a production division of a Company for the year 2021/2022.

	Budgeted	Actual
Overheads (Rs. '000)	6,000	7,000
Labour hours ('000)	1,000	1,100

The details of an activity performed during the period are as follows.

Direct material cost (Rs.)	5,200
Direct labour cost (Rs.)	2,800
Number of direct labour hours	400

Required:

Calculate the total cost of the above activity and over or under absorption of overheads for the period.

(02 Marks)

(Total Marks 14)

Question No. 02.

A. A Company assembles three types of motorcycle at the same factory: the 250CC Sunshine; the 500CC Roadster and the 1000CC Fireball. It sells the motorcycles throughout the world. In response to market pressures the company has invested heavily in new manufacturing technology in recent years and, as a result, has reduced the size of its workforce. Historically, the company has allocated all overhead costs using total direct labour hours (at a rate of Rs. 500 per hour) but is now considering introducing activity-based costing (ABC) system. Accountant of the company has produced the following analysis.

Types	*Annual output (units)*	*Annual direct labour hours*	*Selling price (Rs. per unit)*	*Raw material cost (Rs. per unit)*
250CC Sunshine	2,000	160,000	400,000	40,000
500CC Roadster	1,600	176,000	600,000	60,000
1000CC Fireball	400	64,000	800,000	90,000

The annual cost driver volumes of each activity used for each type of motorcycle are as follows:

Types	*Number of deliveries to retailers*	*Number of set ups*	*Number of purchase orders*
250CC Sunshine	90	35	180
500CC Roadster	80	40	130
1000CC Fireball	70	25	50

The annual overhead costs relating to these activities are as follows:

Deliveries to retailers cost	Rs. 240 million
Set-up cost	Rs. 600 million
Purchases order cost	Rs. 360 million

Required:

Calculate the total profit on each of the three products of the company using each of the following methods to attribute overheads:

i. The existing method (traditional absorption costing -TAC) based upon labour hours.
ii. Activity-based costing (ABC).

(08 Marks)

B. What is the difference between stock valuations using absorption costing and marginal costing?

(02Marks)

C. A company makes and sells a single product. The selling price, cost per unit and other information for the month of July 2022 are given below.

	Rs.
Selling price	700
Direct material cost	100
Direct labour cost	120
Variable production overheads cost	80
Variable selling overheads cost	20
Fixed production overheads cost	200

	Units
Opening inventory	1,400
Production	7,500
Sales	7,000

Fixed production overhead costs for the month were Rs.1.6 million and fixed selling overhead costs were Rs. 360,000.

Required:

Prepare the income statements by using absorption costing method for the month of July 2022.

(04 Marks)

(Total Marks 14)

Question No. 03.

A. Distinguish between normal process losses and abnormal process losses and abnormal gains.

(01Mark)

B. "Job costing is a form of specific order costing and it is used when a customer orders a specific job to be done".

Briefly explain special features of job costing.

(02 Marks)

C. A hotel calculates several statistics including average cost per occupied bed per day. The following information is provided for a 30-day period.

	Room with twin bed	***Single bed***
Number of rooms available to let	240	40
Average number of rooms occupied daily	220	35
Cost for the 30-day period (Rs.)	8,550,000	

Required:

i. Calculate the average cost per occupied bed per day.
ii. Calculate the average room occupied ratio.

(02Marks)

D. A Company has maintained three manufacturing processes and the information related to process 3 for the month of July 2022 is as follows.

Input from process 2 (6,000 units)	Rs.1,660,000
Raw materials added	Rs. 1,086,000
Labour costs	Rs.520,000
Production overheads	Rs.506,000
Cost of the opening work in progress	Rs. 350,000
Actual loss	800 units

Normal loss is 10% of active units and scraps can be sold at Rs.50 per unit. Work in progress at the beginning of the month (OWIP) and ending of the month (CWIP) were 600 units & 1,000 units, respectively. These work in progresses were completed as follows.

	OWIP	***CWIP***
Raw materials transferred from process 2	100%	100%
Raw materials added	60%	75%
Labour costs	40%	40%
Production overheads	30%	20%

Required:

Prepare the process 3 account and other relevant accounts by using FIFO methods.

(09 Marks)

(Total Marks 14)

Question No. 04

A. "Standard costing represents target costs and they are therefore useful for planning and control of business activities and motivation of the managers".
Briefly explain this statement focusing on objectives of standard costing.

(02 Marks)

B. A company produces and sells a single product only. The standard cost and price per unit are as follows.

	Rs.
Direct material A: 10 kg at Rs. 72 per kg	720
Direct material B: 06 kg at Rs. 30 per kg	180
Direct labour: 05 hours at Rs 48 per hour	240
Variable production overhead	360
Total standard variable cost per unit	1,500
Standard contribution per unit	300
Standard selling price per unit	1,800

The variable production overhead included in the standard cost is based on an expected monthly output of 750 units. During the month of July 2022, the actual results were as follows.

	Rs.	***Rs.***
Sales 700 units at Rs. 1,920		1,344,000
Less:		
Direct materials: Material A: 7,500 kg	549,000	
Material B: 3,500 kg	121,800	
Direct labour: 3,400 hours	167,280	
Variable production overhead cost	222,000	
Total actual variable cost for the month		1,060,080
Total actual contribution for the month		283,920

Required:

i. Calculate all the relevant variances.

ii. Prepare an operating statement reconciling the budgeted contribution with the actual contribution.

(08 Marks)

C. The standard direct material cost for a product is Rs. 500 per unit (12.5 kg at Rs. 40). In the month of July 2022, the actual amount paid for 45,600 kg of material purchased and used was Rs. 1,732,800. The direct material price variance and usage variance of the month were Rs. 91,200 favourable and Rs. 152,000 adverse, respectively.

Required:

Calculate the actual production units for the month of July.

(02 Marks)

D. A Company has provided below mentioned information to you for the month of July 2022.

	Budgeted	***Actual***
Monthly production (units)	25,000	25,500
Monthly fixed overhead (Rs.)	500,000	573,750
Direct labour (hours)	50,000	44,625

Required:

Calculate the fixed overhead expenditure, capacity, efficiency, and volume variances for the month of July 2022.

(02 Marks)

(Total Marks 14)

Question No. 05.

A. A company produces a single product and sells at Rs. 50 per each unit and provides the following information for the product.

	Current Year	***Next Year (Budgeted)***
Total Sales (Rs.)	1,000,000	1,320,000
Total costs (Rs.)	768,000	1,020,000

According to the next year budget selling price per unit is expected to increase by 20% and sales volume is expected to increase by 10%. The total cost of manufacturing is expected to increase by 25% due to the inflation. The above changes have been considered when preparing the next year budget.

Required:

i. Calculate the fixed cost, breakeven point, and margin of safety in units for both years.

ii. Calculate the number of units to be produced and sold for obtaining an annual profit of Rs. 102,000.

(05 Marks)

B. A Company produces and sells two products namely product "M" and "N". The Company has forecasted the following information for the year ended 31st March 2022.

	Product M	*Product N*
Sales price per unit (Rs.)	200	150
Variable cost per unit (Rs.)	80	90

It is estimated that the total fixed cost and the profit for the year ended 31st March 2022 to be Rs. 1.2 million and Rs. 1.44 million respectively. Further it is expected to sell one unit of product M for every two units of product N sold by the Company.

Required:

i. Compute the weighted average profit volume ratio based on the expected sales proportion.
ii. Assess the quantity of each product to be sold to achieve the target profit.

(02 Marks)

C. A Company produces three products named A, B & C. The information related to products is as follows (per unit).

	A (Rs.)	*B (Rs.)*	*C (Rs.)*
Selling price	600	1,200	1,600
Variable cost			
Direct material cost (Rs.50 per unit)	200	350	600
Direct labour cost	100	200	500
Variable overhead cost	160	300	440
Total variable cost	460	850	1,540
Expected sales for the month (Units)	300	450	250

The directors of the company have decided to produce at least 150 units of every product regardless of losses to be incurred relating to any of products so that enabling them to meet the competition. The quantity of raw materials to be obtained per month is limited to 6,270 units. The monthly fixed overhead cost is Rs. 75,000.

Required:

i. Calculate the best suitable mix of three products.
ii. Calculate the monthly profit of the company.

(04 Marks)

D. A Company produce three products named R, S and T by using same type of machines. It is expected to produce 4,000 units of each product and sell next year. The number of machine hours available of the next year is restricted to 30,000 and a supplier agreed to supply each product. The information related to a unit is as follows.

	R	S	T
Machine hours	3	2	4
Variable cost (Rs.)	20	36	24
Supplier's price (Purchase price-Rs.)	29	40	34

Required:

Calculate number of units that should be purchased from the outside supplier.

(03 Marks)
(Total Marks 14)

Question No. 06.

A. A 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 provided that, for every Rs. 30 increase in price, demand would be expected to fall by 500 units. If the Company set the price at Rs. 500, only 2,000 units would be demanded. The variable cost per unit is Rs. 80.

Required:

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

(02 Marks)

B. A Company produces three products named as T, U and W. The following information relates to the current year.

Product	***T***	***U***	***W***
Selling price per unit (Rs.)	2,250	4,000	7,500
Direct material cost per unit (Rs. 100 per kg) –(Rs.)	1,000	1,600	4,000
Direct labour cost per unit (Rs. 150 per hour) – (Rs.)	600	900	1,800
Annual sales (units)	2,000	1,500	1,400
Closing finished goods stock (units)	600	500	300

The stock level of raw material at the end of the current year was 24,000 kgs. According to the forecast made for the next year, sales are expected to be increased by 25% of three products. The company also expects to increase the stock levels of the direct material and finished goods of three products by 10% at the end of next year.

Required:
Prepare the Sales, Production, Material Purchase, and Labour cost budgets for the next year.

(04 Marks)

C. A company forecasted the following sales for the next six months in the year 2022. (In Rs. million)

May	*June*	*July*	*August*	*September*	*October*
440	480	480	400	440	400

The following additional information is also available.

1. 50% of the sales are on cash basis and the balance 50% of the sales are on credit cards. The Company has to pay 5% commission on credit card sales to the credit card company and 5% discount is allowed for the cash sales. Cash is collected for the credit card sales in the following month.

2. A monthly fixed overhead cost of Rs. 35 million is paid with one-month arrears and which includes monthly depreciation of Rs. 10 million.

3. Salaries include Rs. 10 million monthly fixed salaries and variable salaries 10% on total sales are paid in the month which is incurred.

4. Cost of sales is 40% on sales and a period of one month is given for the settlements of creditors.

5. 50% of the next month's sales will be maintained in the closing stocks.

6. The following details relate to the capital budget plan.
   i. Acquisition of property, plant and equipment are Rs. 50 million in July and Rs. 20 million in September.
   ii. Disposal of property, plant and equipment is Rs. 60 million in August.
   iii. Invest Rs. 300 million in a new project in the month of September.

7. The Company should pay Rs.12 million income taxes in August.

8. Opening balance of cash is Rs. 40 million.

Required:
Prepare the cash budget for the period of July to September 2022 on a monthly basis. (Total column not necessary).

(08 Marks)
(Total Marks 14)