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No of Questions - 07

**SCHOOL OF ACCOUNTING AND BUSINESS  
BSc. (APPLIED ACCOUNTING) GENERAL / SPECIAL DEGREE  
PROGRAMME**

**YEAR I SEMESTER I – INTAKE VIII (GROUP A)  
END SEMESTER EXAMINATION – JULY 2017**

**AFM 10230 Fundamentals of Management Accounting**

Date : 20th July 2017  
Time : 9.00 a.m. - 12.00 p.m.  
Duration : Three (03) hours

**Instructions to Candidates:**

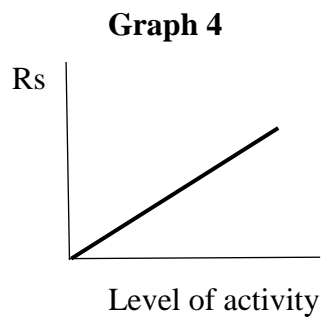
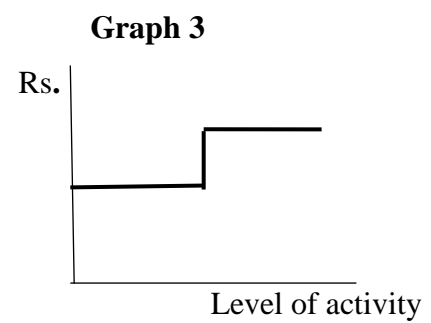
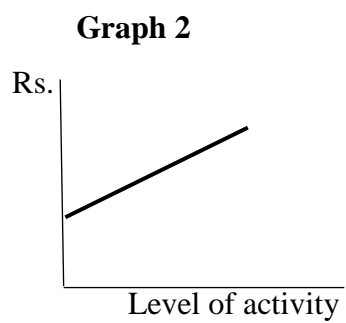
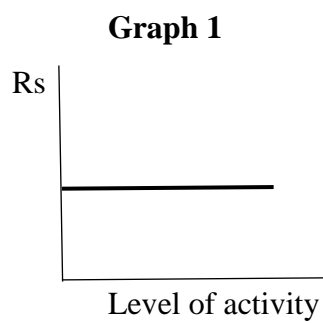
- This paper consists of three parts (A, B and C).
- Part A – Answer **ALL** questions in the separate sheet provided
- Part B – **Question No. 02** is **Compulsory**
- Part C – Answer **Three (03)** Questions only
- The total marks for the paper is 100.
- The marks for each question are shown in brackets.
- Use of scientific calculator is allowed.
- Answers should be written neatly and legibly

**Part A**  
Answer **ALL** Questions

**Question No. 01**

Select the most appropriate answer.

- Use the following graphs to answer the questions 1, 2 and 3



Which one of the above graphs illustrates the costs describe below.

1. A linear variable cost – when the vertical axis represents total cost incurred.
  - a. Graph 1
  - b. Graph 2
  - c. Graph 3
  - d. Graph 4

2. A fixed cost – when the vertical axis represents total cost incurred.
  - a. Graph 1
  - b. Graph 2
  - c. Graph 3
  - d. Graph 4
  
3. A linear variable cost – when the vertical axis represents cost per unit.
  - a. Graph 1
  - b. Graph 2
  - c. Graph 3
  - d. Graph 4
  
4. The following data relate to two activity levels of an out – patient department in a hospital:

Number of consultations per period	4500	5,750
Overheads	Rs. 269, 750	Rs. 289, 125

Fixed overheads are not affected by the number of consultations per period. The variable cost per consultation:

- a. Rs. 15.50
  - b. Rs. 44.44
  - c. Rs.59.94
  - d. Cannot be calculated without more information
- 
5. The following data have been collected for four cost types, W,X,Y and Z at two activity levels:

	<b>Cost</b>	<b>Cost</b>
	<b>100 units</b>	<b>140 units</b>
<b>Cost type</b>	<b>Rs.</b>	<b>Rs.</b>
W	8,000	10,560
X	5,000	5,000
Y	6,500	9,100
Z	6,700	8,580

Where, V= Variable Cost, SV= Semi variable Cost, F = Fixed Cost, assuming linearity, the four cost types W, X, Y, Z are respectively:

	W	X	Y	Z
a.	V	F	SV	V
b.	SV	F	V	SV
c.	V	F	V	V
d.	SV	F	SV	SV

6. P Lanka Ltd absorbs overheads on the basis of direct labour hours. The overhead absorption rate for the period has been based on budgeted overheads of Rs.150,000 and 50,000 direct labour hours.

During the period overheads of Rs.180, 000 were incurred and 65,000 direct labours were used.

Which one of the following statements is correct?

- Overheads was Rs.15,000 under absorbed
- Overheads was Rs.15,000 over absorbed
- No over – or under absorption occurred
- None of the above

7. An organization currently provides a single service. The cost per unit of that service is as follows:

	Rs.
Direct materials	22
Direct labour	15
Direct expenses	3
Variable overheads	<u>10</u>
Total variable cost	50
Selling price	130

Total fixed costs for the period amount to Rs.1, 600,000. How many units of service (to the nearest whole unit) will the organisation need to provide to customers to generate a profit of Rs.250, 000?

- a. 23,125
  - b. 20,555
  - c. 20,000
  - d. 26,428
8. P Ltd provides plumbing services. Due to a shortage of skilled labour next period, the company is unable to commence all the plumbing jobs for which customers have accepted estimates.

When deciding which plumbing job should be commenced, the jobs should be ranked according to the:

- a. Contribution to be earned from each job
- b. Profit to be earned from each job
- c. Contribution to be earned per hour of skilled labour on each job
- d. Profit to be earned per hour of skilled labour on each job

9. A contract is under consideration that requires 800 labour hours. There are 450 hours of spare labour capacity for which the workers are still being paid at the normal rate of pay. The remaining hours required for the contract can be found either by working overtime paid at 50% above the normal rate of pay or by diverting labour from the manufacture of product BK.

If the contract is undertaken and labour is diverted then sale of product BK will be lost. Product BK takes seven labour hours per unit to manufacture and makes a contribution of Rs. 14 per unit. The normal rate of pay for labour is Rs. 8 per hour.

What is the relevant cost of labour?

- a. Rs. 3,500
  - b. Rs. 4,200
  - c. Rs.4,500
  - d. Rs.4,900
10. Good hope has recently launched an agro product and the management has decided to price the product at a low price initially with the intention of discouraging the competition and increasing the market share. This pricing method is called,
- a. Market skimming pricing
  - b. Competitor based pricing
  - c. Cost based pricing
  - d. Market penetration pricing

## PART B

### **Question No. 02 – Compulsory**

XYZ Company produces two products, Product 1 and Product 2. These two products pass through two production divisions, Assembly and Finishing and two service divisions, Maintenance and Stores. The following information is related to the company for the month ended 30<sup>th</sup> June 2017.

	<b>Assembly</b>	<b>Finishing</b>	<b>Maintenance</b>	<b>Stores</b>
Area occupied (sq. ft.)	24,000	36,000	16,000	4,000
KW hours consumed	1,000	1,200	500	500
Plant and equipment (Rs.000)	1,400	1,200	800	500
Number of employees	100	120	50	20
Direct labour hours	32,000	54,000	4,000	5,000
Direct Wages (Rs.)	150,000	250,000	40,000	50,000
Machine hours	78,000	16,000	4,000	5,000
Number of stores requisitions	310	1,112	100	
Allocated costs	<b>Rs.</b>	<b>Rs.</b>	<b>Rs.</b>	<b>Rs.</b>
- Indirect wages	100,000	120,000	80,000	50,000
- Indirect materials	20,000	100,000	100,000	20,000
- Maintenance	50,000	20,000	10,000	5,000
- power	25,000	10,000	5,000	4,000

### **Other costs in total**

	<b>Rs.</b>
Rent	200,000
Business rates	100,000
Insurance on building	125,000
Lighting and heating	25,000
Depreciation on plant and equipment	50,000
Factory administration and personal	20,000
Insurance on plant and equipment	80,000

Maintenance department cost is shared out among the two departments as follows.

- Assembly      50%
- Finishing      50%

The stores department's overheads are to be reapportioned on the basis of the number of requisitions issued to other three departments.

Budgeted labour hours used in each department by each product

	Assembly	Finishing
Product 1	2 hrs	3 hrs
Product 2	1 hr	2 hrs

Budgeted machine hours used in each department by each product

	Assembly	Finishing
Product 1	3 hrs	1 hr
Product 2	4 hrs	1/2 hr

Actual details	Product 1	Product 2
Number of units to be produced	10,000	12,000
Direct Material cost (Rs)	180,000	150,000
Direct Labour cost (Rs)	20,000	25,000

	Product 1	Product 2
<b><u>Actual machine hours</u></b>		
Assembly	35,000	45,000
<b><u>Actual labour hours</u></b>		
Finishing	30,000	20,000

Actual Overheads incurred is as follows:

- |             |        |
|-------------|--------|
|             | Rs.    |
| - Assembly  | 36,650 |
| - Finishing | 85,400 |



**Required:**

- a. Calculate the total cost of production cost centres adhering to the following steps;
  - i. Allocate directly attributable costs to cost centres
  - ii. Apportion the common costs to cost centres using the most appropriate basis
  - iii. Reapportion the service cost centre cost to production cost centre

(08 Marks)

- b. Calculate the budgeted overhead absorption rates for each of the production departments using the most appropriate basis for recovery in each case

(04 Marks)

- c. Calculate the cost per unit of Product 1 and Product 2 separately

(04 Marks)

- d. Find over/ under absorbed overhead cost for the given period for Assembly and Finishing divisions separately.

(04 Marks)

**(Total 20 Marks)**

## PART C

### Answer **Three (03)** Questions

#### **Question No. 03**

Road Runner Ltd. assembles three types of products at the same factory: the 50cc Sunshine; the 250cc Roadster and the 1000cc Fireball. It sells the motorcycles throughout the world. In response to market pressures, Road Runner Ltd. has invested heavily in new manufacturing technology in recent years, which resulted in significantly reducing the size of its workforce.

Historically, the company has allocated all overhead costs using total direct labour hours, but is now considering introducing Activity Based Costing (ABC). Road Runner Ltd.'s accountant has produced the following analysis.

	<b>Annual Output (Units)</b>	<b>Annual direct labour Hours</b>	<b>Selling price (Rs. per unit) '000'</b>	<b>Raw material cost (Rs. per unit) '000'</b>
Sunshine	2,000	200,000	100	40
Roadster	1,600	220,000	150	60
Fireball	400	80,000	180	90

According to the Accountant Road Runner Ltd. following cost pools and cost driver information is as available.

<b>Cost Pool</b>	<b>Cost Driver</b>	<b>Cost Rs.</b>
Order handling cost	Number of purchase orders	2,400,000
Assembly line cost	Set up cost	6,000,000
Transport and deliveries	Number of deliveries to retailers	<u>3,600,000</u>
		<u><b>12,000,000</b></u>

The annual cost driver volumes relating to each activity and for each type of motorcycle are as follows:

	<b>Number of Deliveries to retailers</b>	<b>Number of set-ups</b>	<b>Number of purchase orders</b>
Sunshine	100	35	400
Roadster	80	40	300
Fireball	70	25	100

All direct labour is paid at Rs.5 per hour. The company holds no inventories.

**Required:**

- a. Calculate the total profit on each of Road Runner Ltd.'s three types of product using each of the following methods to attribute overheads:
  - i. The existing method based upon labour hours
  - ii. Activity based costing.
- b. Explain the impact to the company by changing its overhead allocation method to ABC costing with special insights in to the suitability of ABC costing for Road Runner Ltd.

(06 Marks)

(08 Marks)

(06 Marks)

**(Total 20 Marks)**

#### **Question No. 04**

- a. Differentiate between the First – in – First out method and Weighted Average method of valuing working progress in a process costing system.

(05 Marks)

- b. Mango Plc produces soft drink using mango as the primary ingredient. Production passes through 3 production processes and the following information is related to process 1 for the month of June.

Material added to the process	10,000 litres	Rs. 100,000
Direct labour	200 hours at Rs.250 per hour	Rs. 50, 000
Overheads		Rs. 25, 000

Normal loss is 5% of the material input and it can be sold to Rs. 10 per litre as scrap. Actual results for the period are as follows.

Units transferred to process 2 as finished	9,200 litres
No Work – in – progress was found	

#### **Required:**

- i. Calculate the value of outputs transferred to process 2.

(02 Marks)

- ii. Prepare process 1 account, scrap account, abnormal gain or loss account.

(07 Marks)

- c. Following information is available related to the **process 1 for the August** month of Mango Plc.

Opening work – in – progress	200 litres
Material added during the August month	1,200 litres
Closing work – in – progress	200 litres

Cost incurred and percentage completion of opening and closing work – in – progress is as follows,

<b>Inventory Item</b>	<b>% completed during <u>July</u> month</b>	<b>Cost incurred in <u>July</u> month</b>
Opening work – in – progress	- 100%	- Rs.5,000
- Material	- 40%	- Rs. 1,500
- Labour	- 60%	- Rs. 2,200
- Overhead		

<b>Inventory Item</b>	<b>% completed during <u>August</u> month</b>
Closing work – in – progress	
- Material	- 100%
- Labour	- 50%
- Overhead	- 40%

Cost incurred during the august month is as follows:

Material cost               Rs. 120,000

Labour cost                 Rs. 75,000

Overhead cost             Rs. 60,000

There were no process losses.

**Required:**

- Assuming that the company uses FIFO method in valuing work –in- progress, prepare the equivalent unit statement. (04 Marks)
- Calculate the value of finished goods transferred to process 2 at the end of August month. (02 Marks)

**(Total 20 Marks)**

### **Question No. 05**

a. Briefly explain relevant costing with special features of a relevant cost.

(05 Marks)

b. Body line garment has decided to invest in a new product line with the objective of expanding the operations of the organization. Development of the product line has taken place since 2015 and the development expenditure has amounted to Rs. 150,000. In order to decide the market price of the products in the new product line, Body line has conducted a market research at the beginning of the year at a cost of Rs.50, 000.

Following operational information is related to **one unit** of product “Zeya”, which is one of the garment products of the new line.

#### Materials

- Material A (5 meters at Rs.20 per meter)	Note 1	Rs. 100
- Material B (3 meters at Rs.12 per meter)	Note 2	Rs. 36

#### Labour

- Skilled labour (2 hours at Rs.250 per hour)	Note 3	Rs. 500
- Unskilled labour(1 hour at Rs.150 per hour)	Note 4	Rs. 150

Overhead	Note 5	Rs. 100
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**Note 1** - Material A is used regularly by Body line, and if units of A are required for this job, they would need to be replaced to meet other production demand. To produce one unit of Zeya, 5 meters of material A is required. Currently there are 1000 meters available in inventory purchased at Rs.20 per meter. (Monthly production of Zeya is 1,000 units). The replacement cost per meter will be Rs.22.

**Note 2** – Material B is not available in the inventory at the moment and to replace this material, it will cost Rs.12 per meter.

**Note 3** – Skilled workers are fully occupied at the moment and if this project is undertaken, they will have to work over time. Usual rate is Rs. 125 per hour and any over time is paid at a doubled rate (Rs.250 per hour).

**Note 4** – Unskilled labourers are currently idling. Thus this project can be completed within the usual working time, for which they are paid irrespective of the new project at the rate of Rs.150 per hour.

**Note 5** – overheads include general overheads of Rs.50 per unit.

**Required:**

Identify the relevant cost(state reasons if any cost is not taken for the calculation) of the project and calculate the relevant cost per unit of “Zeya”

(15 Marks)

**(Total 20 Marks)**

**Question No. 06**

a. Briefly explain CVP analysis with its underlined assumptions.

(05 Marks)

b. A company makes and sells a single product. The selling price is Rs.12 per unit. The variable cost of the product is Rs.9 per unit and fixed costs per month are Rs.240, 000. The company budgets to sell 90,000 units of the product a month.

**Required:**

i. Calculate budgeted profit per month and what is the breakeven point in sales units?

(04 Marks)

ii. Calculate is the margin of safety?

(02 Marks)

iii. How many units of sales be to achieve a monthly profit of Rs.120, 000?

(02 Marks)

- c. PL produces and sells two products, M and N. Product M sells for Rs.7 per unit and has a total variable cost of Rs.2.94 per unit, while Product N sells for Rs.15 per unit and has a total variable cost of Rs.4.40 per unit. The marketing department has estimated that for every five units of M sold, one unit of N will be sold. The organization's fixed costs per month total Rs.123, 600.

**Required:**

- i. Calculate the weighted average C/S ratio for PL.  
(02 Marks)
- ii. Calculate the breakeven point for PL in units and sales value  
(05 Marks)
- (Total 20 Marks)**

**Question No. 07**

- a. Briefly explain 5 factors that influence price of a product  
(05 Marks)
- b. Assume that BK Ltd operates in a perfect competitive market where profit maximizing occurs when  $MR = MC$ .

Marginal revenue =  $a - 2bQ$  and selling price is given by  $P = a - bQ$ ,

BK Ltd has used market research to determine that if a price of Rs.250 is charged for product G, demand will be 12, 000 units. It has also been established that demand will rise or fall by 5 units for every Rs.1 fall/rise in the selling price. The marginal cost of product G is Rs. 80.

**Required:**

- i. Calculate the profit-maximizing selling price for product G  
(07 Marks)



c. Write short notes on the following

i. Market penetration pricing

(04 Marks)

ii. Market skimming pricing

(04 Marks)

**(Total 20 Marks)**