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

## YEAR I SEMESTER I (Intake V- Group B) END SEMESTER EXAMINATION - DECEMBER 2015

AFM 10230 Fundamentals of Management Accounting

| Date | $:$ | 18th December 2015 |
| :--- | :--- | :--- |
| Time | $:$ | 5.30 p.m. -8.30 p.m. |
| Duration | $:$ | Three $(03)$ hours |

## Instructions to Candidates:

- This paper consists of seven (07) questions.
- Answer any five (05) questions in all, selecting the Question No. 01, any four (04) questions.
- Please submit answers to Question No. 01 separately.
- 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.


## Question No. 01

1. The modern view of the objective of a business firm
a. Maximizing profits for the owners
b. Maximizing shareholders' wealth
c. Maximizing shareholders' wealth through maximizing the present value of future net cash inflows
d. Maximizing benefits for the shareholders
e. Maximizing sales revenue in the long run in order to become the market leader.
2. Which of the following is a 'rational decision making situation

Consider the typology given below:

| Assignment of costs to cost objectives |  |  |  |
| :--- | :--- | :---: | :---: |
| Cost |  | Direct | Indirect |
| Behaviour | Variable | A | D |
| Pattern | Fixed | B | C |

Assuming a restaurant, identify $\mathrm{A}, \mathrm{B}, \mathrm{C}$ and D
a. $A=$ cost of fruits, $B=$ cook's wages,$C=$ electricity, $D=$ manager's salary
b. $A=$ cook's wages, $B=$ electricity, $C=$ manager's salary, $D=$ cost of fruits
c. $A=$ cost of fruits, $B=$ cook's wages, $C=$ manager's salary, $D=$ electricity
d. $A=$ electricity, $B=$ cost of fruits, $C=$ manager's salary, $D=$ cook's wages
e. $A=$ cost of fruits, $B=$ manager's salary, $C=$ cook's wages, $D=$ electricity
3. Select the graph which illustrates the total cost of an incentive bonus given at a constant rate per unit of output after a certain level of output.
a.

b.

c.

d.

e.

4. Consider the costs associated with the purchase and operation of Praneetha Pie Shop. The related investment is Rs. 750,000. Nimal has personal savings of Rs. 750,000 that he can invest in the enterprise. Sarath, another possible franchisee must borrow the entire Rs. 750,000 at a cost of $15 \%$, (Rs. 112,500). Both seem equally competent to manage it.

Does Sarath's Rs. 112,500 annual interest expense mean that his costs of operating the shop are distinctly greater than those of Nimal's?
a. Yes, as Sarath's interest payment of Rs. 112,500 is a real cash outlay.
b. No, as Nimal too incurs a similar cost in value, in the form of foregone income.
c. Yes, the risk of running the enterprise is more for Sarath.
d. No, as the risk of running the enterprise is more for Nimal.
e. It is not possible to decide with the limited information.
5. Imagine a ship repair yard which is short of work with many men idle, but receiving guaranteed wages. Tenders are invited for an immediate repair to a damaged ship, which will take a few weeks to complete. Rumors on the grapevine suggest that another firm is tendering on the basis of direct material and direct-labour plus only one half of the normal fixed overhead charge. Is it still worth competing?
a. No, as budgeted profits, may for the year may not be attained.
b. No, as total cost of the job may not be covered.
c. Yes, as it will improve the morale of people in the organization.
d. Yes, as any price above its variable (direct) cost will earn some contribution towards its fixed costs.
e. Yes, as this move is likely to oust the rival firm from business.
6. A drug company has initiated a research project which is intended to develop a new product. Expenditure to-date on this particular research project total Rs. 6,000,000, but it is now estimated that a further Rs. 2,000,000 will need to be spent before the product can be marketed. Over the estimated life of the product the income potential has value of Rs. 1,500,000.

With regard to the above scenario which of the following statement is false?
a. Continue the project as Rs. $6,000,000$ has already been incurred and has to be recoverd.
b. Abandon the project as there is a loss of Rs. 500,000 arising in the future.
c. Rs. $6,000,000$ should not be taken in to the analysis.
d. Rs. $1,500,000$ is a relevant income to be taken into the analysis.
e. Abandon the project as it incurs an overall loss of Rs. 6,500,000.
7. Which method of accumulating product costs, Job-order costing (J) or Process Costing (P) would be more appropriate in each of the following situations?

A=A text book publisher
B = A manufacturer of powdered milk
$\mathrm{C}=\mathrm{An}$ auto repair shop
$\mathrm{D}=\mathrm{A}$ tire manufacturing plant
$\mathrm{E}=\mathrm{An}$ advertising firm
a. $\mathrm{A}=\mathrm{P} \quad \mathrm{B}=\mathrm{P} \quad \mathrm{C}=\mathrm{J} \quad \mathrm{D}=\mathrm{J} \quad \mathrm{E}=\mathrm{P}$
b. $\mathrm{A}=\mathrm{J} \quad \mathrm{B}=\mathrm{J} \quad \mathrm{C}=\mathrm{P} \quad \mathrm{D}=\mathrm{P} \quad \mathrm{E}=\mathrm{P}$
c. $\mathrm{A}=\mathrm{J} \quad \mathrm{B}=\mathrm{P} \quad \mathrm{C}=\mathrm{J} \quad \mathrm{D}=\mathrm{J} \quad \mathrm{E}=\mathrm{J}$
d. $\mathrm{A}=\mathrm{J} \quad \mathrm{B}=\mathrm{P} \quad \mathrm{C}=\mathrm{J} \quad \mathrm{D}=\mathrm{P} \quad \mathrm{E}=\mathrm{J}$
e. None of the above.
8. The following data is available in the annual budget of the manufacturing firm Shah Ltd.

Budgeted production overhead cost $=$ Rs. 400,000
Budgeted labour hours $=200,000$

At the end of the accounting period, the actual production overhead cost amounted to Rs. 450,000 and the actual labour hour worked 150,000 . The firm uses the direst labour hour rate for absorption of production overhead costs. This results in
a. Rs. 50,000 under-recovered
b. Rs. 50,000 over-recovered
c. Rs. 150,000 under-recovered
d. Rs. 150,000 over-recovered
e. None of the above.
9. Select the correct statement/s from the following:
i. Overhead rates based on actual data are preferred over pre-determined overhead absorption rates.
ii. There is no overhead absorption rate which is appropriate to be used under all conditions.
iii. The amount of under-recovered overhead is considered as part of product cost.
iv. Cost apportionment is that part of cost attribution which assigns a specific cost to a cost center or cost unit.
v. Overheads are costs common to two or more costing units.
a. i only
b. i \& v only
c. ii \& iv only
d. i, iii \& v only.
e. ii and $v$ only.
10. When there are joint products in a process, there is a need for apportionment of joint costs into the joint products. The best method of allocating joint product costs in all circumstances:
a. Physical volume method
b. Constant gross profit method
c. Relative sales value method
d. Weighted average method when there are price changes and FIFO method when the prices are relatively stable over the period.
e. There is no best method.
(Total 20 Marks)

## Question No. 02

Having attended a course on activity-based-costing (ABC) you decide to experiment by applying the principles of ABC to the four products currently made and sold by your company. Details of the four products and relevant information are given below:

| Product | A | B | C | D |
| :--- | :---: | :---: | :---: | :---: |
| Output in units | 120 | 100 | 80 | 120 |
| Costs per unit |  |  |  |  |
| $\quad$ Direct material (Rs.) | 40 | 50 | 30 | 60 |
| Direct labour (Rs.) | 28 | 21 | 14 | 21 |
| Machine hours (per unit) | 4 | 3 | 2 | 3 |

The four products are similar and are usually produced in production runs of 20 units and sold in batches of 10 units.

The production overhead is currently absorbed by using a machine hour rate, and the total of the production overhead for the period has been analysed as follows:
Machine department costs $\quad 10,430$
(rent, business rates, depreciation and supervision)
Set-up costs 5,250
Stores receiving costs $\quad 3,600$
Inspection/ Quality control costs 2,100
Materials handling and dispatch costs 4,620

You have decided to use the following 'cost drivers' in order to allocate the overheads:

## Cost

Set up costs
Stores receiving
Inspection/ Quality control
Materials handling and dispatch

## Cost driver

Number of production costs
Requisitions received
Number of production runs
Orders executed

The number of requisitions raised on the stores was 20 for each product and the number of orders executed was 42 , each order being for a batch of 10 of a product.

## Required:

i. Calculate the total cost for each product if all overhead costs are absorbed on a machine hour basis;
(06 Marks)
ii. Calculate the total cost for each product, using activity-based costing; and
(08 Marks)
iii. Prepare a Table giving cost per unit of each product computed under (i) and (ii) and identify differences.
(06 Marks)
(Total 20 Marks)

## Question No. 03

a. State the main difference between the technique of job costing and process costing?
(10 Marks)
b. Chemical Processors manufacture Wonder-chem using two processes, mixing and distillation. The following details relate to the distillation process for a given period.

No opening work in progress (WIP)
Input from mixing $\quad 36,000 \mathrm{~kg}$ at a cost of Rs. 166,000
Labour for period
Rs. 43,800
Overheads for period
Rs. 29,200

Closing WIP of $8,000 \mathrm{~kg}$, which was 100 per cent complete for materials and 50 per cent for labour and overheads. The normal loss in distillation is 10 per cent of fully complete production. Actual loss in the period was $3,600 \mathrm{~kg}$. Fully complete, which were scrapped.

## Required:

i. Calculate whether there was a normal or abnormal loss or abnormal gain for the period.
ii. Prepare the distillation process account for the period, showing clearly weights and values.

## Question No. 04

a. What is meant by 'Sensitivity Analysis?'
(02 Marks)
b. Due to erratic sales, Sunflower Company has been experiencing difficulty for some time. The company's income statement for the most recent month is given below:

## Rs. <br> Rs.

Sales (19,500@30)
Less: Variable Expenses 409,500
Fixed Expenses $\quad \underline{180,000}$
585,000

589,500
Net Loss
$(4,500)$

## Required:

i. Compute the company's break-even point in both units and rupees.
(04 Marks)
ii. The following suggestions have arisen at a recent meeting attended by Chairman, Sales Manager and Production Manager.
The Chairman is certain that a Rs. 16,000 increase in the monthly advertising budget, combined with an intensified effort by the sales staff will result in a Rs. 90,000 increase in monthly sales. If the Chairman is right what will be the effect on the company's net income or loss?
(04 Marks)
iii. Refer to the original data. The sales manager is convinced that a 10 percent reduction in the selling price, combined with an increase of Rs. 60,000 in the monthly advertising budget, will cause unit sales to double. What will the new income statement look like if these changes are adopted?
(04 Marks)
iv. Refer to the original data. By automating certain operations, the company could reduce variable costs by Rs. 3 per unit. However fixed costs would increase by Rs. 72,000 each month. Compute the new break-even point in both units and rupees. Would you recommend the change if the future economic condition is likely to be recessionary?

## Question No. 05

a. A catering business which runs a restaurant, a bar and a snack counter on the same premises draws up its income statement for the last year.

|  | Restaurant | Bar | Snacks | Total |
| :--- | ---: | ---: | ---: | :--- |
|  | $\underline{4,250,000}$ | $\underline{2,550,000}$ | $\underline{2,125,000}$ | $\underline{8,925,000}$ |
| Sales (Rs.) | 655,000 | 417,500 | 210,000 | $1,282,500$ |
| Cost of food \& drinks sold (Rs.) | $1,370,000$ | 937,500 | $1,175,000$ | $3,482,000$ |
| Wages (variable) (Rs.) | $1,175,000$ | 705,000 | 587,500 | $2,467,500$ |
| Overheads (Rs.) | $1,050,000$ | 490,000 | 152,500 | $1,692,500$ |
| Net profit (Rs.) |  |  |  |  |
|  | 25 | 19 | 7 | 19 |
| Net profit as a \%of sales | 500 | 200 | 100 | 800 |

On the basis of net profit figures one of the partners wants to close the snack counter and expand the restaurant. The other partner doubts the wisdom of this course of action and requests you to examine the figures and advise.

## Required:

Carry out an appropriate analysis and advise the partner.
(10 Marks)
b. Savi-bala Engines Ltd., manufactures a variety of engines for use in heavy equipment. The company has always produced all of the necessary parts for its engines, including the carburettors. An outside supplier has offered to produce and sell one type of carburettor to Savi-bala Engines Ltd., for a cost of Rs. 3,500 per unit. In order to evaluate this offer the enterprise has gathered the following information relating to its own cost of producing the carburettors internally.

|  | Per unit <br> (Rs.) | 15,000 units per <br> year (Rs.) |
| :--- | ---: | ---: |
| Direct material | 1,400 | $21,000,000$ |
| Direct labour $\quad 1,000$ | $15,000,000$ |  |
| Variable manufacturing | 300 | $4,500,000$ |
| overhead (traceable) $600^{*}$ |  |  |
| Fixed manufacturing overhead  <br> (allocated) $\underline{900}$ | $\underline{900,000}$ |  |
| Common fixed manufacturing | $\underline{13,500,000}$ |  |
| overhead | $\underline{4,200}$ | $\underline{63,500,000}$ |

*One-third supervisory salaries; two-thirds depreciation of special equipment.

## Required:

Assuming that the direct labour and supervisors can be got rid of and that the company has no alternative use for the facilities that are now being used to produce the carburettors, should the outside supplier's offer be accepted? Show the relevant calculations.
(Total 20 Marks)

## Question No. 06

a. Morris Ltd. is ready to introduce a new product on the market and is trying to determine what price to charge. The new product has required a Rs. 2,000,000 investment in equipment and working capital. The company wants a 15 percent ROI on all products. The following cost information is available on the new product.

Per unit
Annual total
Variable production costs (direct material, Rs. 32
direct labour \& variable overhead)
Fixed overhead costs
-
Rs. 400,000

Variable selling and admin. Expenses
Fixed selling and admin. Expenses

Rs. 8

- Rs. 200,000

The company uses cost plus pricing and the absorption approach to costing.

Assume that the company expects to sell 75,000 units each year. What percentage mark-up on variable costs would be required to achieve the target ROI? Using this mark-up what would the selling price per unit be?
b. What is target cost-based pricing? How does it differ from conventional pricing methods? (05 Marks)
c. Distinguish between pricing methods and pricing strategies?
(05 Marks)
(Total 20 Marks)

## Question No. 07

Answer any two of the following:
i. Cost management is imperative in today's globalized world with heightened competitive pressures.
(10 Marks)
ii. Discuss giving due attention to the components cost management.
(10 Marks)
iii. Discuss the emerging role of the Management Accountant in the current context of vast strides of advancements in communication and information technology.
(10 Marks)
iv. State the purpose of a Management Accounting System giving examples for the three aspects served by the system
(10 Marks)
(Total 20 Marks)

