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

**YEAR I SEMESTER II (Intake IV- Group B)**  
**END SEMESTER EXAMINATION – DECEMBER 2015**

**AFM 10430 Intermediate Management Accounting**

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

**Instructions to Candidates:**

- Answer **ALL** questions.
- 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**

- i. Kamal hired ABC Associates to design a new computer-aided manufacturing facility that has the capacity to produce 250 computers per day. The variable costs for each computer are Rs. 35,000 and the fixed costs total Rs. 3,000,000 per month.

**Required:**

Calculate the average cost per unit if the facility normally expects to operate at 80 percent of capacity.

(05 Marks)

- ii. Kalutara Traders produces window blinds and other window treatments for residential homes and office. The owner has asked you to assist him in estimating his future maintenance costs so that he can better predict his firm's profitability. Based on the detailed analysis you have determined that the best cost driver for maintenance costs is machine-hours. These data are from the last six months for maintenance expense and machine hours.

| Month | Maintenance Costs (Rs.) | Hours | Month | Maintenance Costs (Rs.) | Hours |
|-------|-------------------------|-------|-------|-------------------------|-------|
| 1     | 2,625                   | 1,575 | 4     | 2,865                   | 1,785 |
| 2     | 2,670                   | 1,590 | 5     | 2,830                   | 1,720 |
| 3     | 2,720                   | 1,605 | 6     | 2,780                   | 1,695 |

**Required:**

What is the cost equation for maintenance cost using the high-low method?

(05 Marks)

- iii. Sunshine Ltd is a manufacturer of Avant grade hats and headwear. In July, 2015, the company purchased a new machine to aid in producing various product lines. Production efficiency on the new machine increases with workforce experience. It has been shown that as cumulative output on the new machine increases, average labour time per unit decrease. As Sunshine Ltd output doubles from a production level of 500 units produced, the average labour time per unit declines by 10% percent. Production at Sunshine Ltd. varies little from month and averages 3,000 hats per month.

Sunshine Ltd has developed a new style of men's hat, the BOSS, to be produced on the new machine. One hundred BOSS hats can be produced during a total of 25 labour-hours. All direct costs excluding direct labour cost to produce a BOSS hat are Rs. 100. At Sunshine Ltd. direct labour cost per hour is Rs. 500. Fixed costs are Rs. 80,000 per month, and it has the capacity to produce 5,000 hats per month.

**Required**

- a. Sunshine Ltd wishes to set the selling price for a BOSS hat at 150 percent of the production cost. At a production level of 100 units, what is the selling price?
- b. The company has received an order for 2,000 BOSS hats from Amila. Smith is offering Rs. 300 for each hat. Should the company accept Amila's order and produce the 2,000 hats? Justify your answer.

(15 Marks)

**(Total 25 Marks)**

**Question No. 02**

- i. Differentiate between authoritarian and participative styles of budgeting

(05 Marks)

- ii. Kandy Traders is budgeting for sales of 110,000 units of its model GS30 small generator for January, 2016. One unit of GS30 requires 2 kgs of aluminum and 3 kgs of alloy. Kandy Traders plans to have the following inventories for January, 2016:

| Inventory | Beginning    | Ending       |
|-----------|--------------|--------------|
| GS30      | 20,000 units | 10,000 units |
| Aluminum  | 25,000 kgs   | 10,000 kgs   |
| Alloy     | 22,000 kgs   | 24,000 kgs   |

**Required**

Prepare purchase budgets for aluminum and alloy for the month of January, 2016

(05 Marks)

- iii. Max Traders manufactures various electronic assemblies that it sells primarily to computer manufacturers. Max has built its reputation on quality, timely delivery, and products that are consistently on the cutting edge of technology. Max Traders has experienced a rapid decline in sales for existing products as new products become available.

Max Traders has just hired a new management Accountant, Damian. Shortly after reporting for work, he had a conversation with Nimal, Max Trader's General Manager. A portion of the conversation is as follows.

**Nimal:** The thing that fascinates me about the business is that change in its core ingredient. We knew when we started that a reliable stream of new products was one of our key variables, in fact, the only way to cope with the threat of product obsolescence. You see, our products go through only the first half of the traditional product life cycle- the development stage and then the growth stage. Our products never reach the mature product stage or the declining product stage. Towards the end of the growth stage, products die as new ones are introduced.

**Demian:** I suppose your other key variables are cost controls and efficient production scheduling?

**Nimal:** Getting the product to market on schedule, whether efficiently or not, is important. Some firms in this business announce a new product in March to be delivered in June, and they make the first shipment in October, or a year from March or sometimes, never. Our reputation for delivering on schedule could account for our success as much as anything.

**Demian:** Where I previously worked, we also recognized the importance of on-time deliveries.

**Nimal:** The key variable that is your responsibility is cash management. It took us a while to recognize that. At first, we thought that profit was key and that cash is the key and that cash would naturally follow. But now we know that cash is the key and profits naturally follow. Still, we don't manage cash well. Improving our cash management is the main thing we expect from you.

**Required**

- a. Discuss the cash-generating and cash usage characteristics of products associate with in each of the four stages of the product life cycle-development, growth, maturity, and decline.
- b. Describe the cash management problems confronting Max Traders.
- c. Suggest techniques that Demian might implement to cope with Max Trader's cash management problems.

(15 Marks)

**(Total 25 Marks)**

**Question No. 03**

- i. 'As long as the total actual factory overhead is not significant for the operation, there is no need to conduct further analyses of the factory overhead variance.' Do you agree? Explain.

(05 Marks)

- ii. Win Lanka Traders purchased 5,000 kgs of aluminum in November to manufacture 1,000 units of their product. On November 01<sup>st</sup>, the firm had 80kgs of aluminum in hand. At the end of November, the firm only had only 100kgs of aluminum in its warehouse. The firm paid Rs.40 per kg during the month to purchase aluminum. The direct labour standard for one unit of their product is 5 hours at Rs 100 per hour. The firm spent 4,500 direct labour hours for this production spending Rs 550,000 during the month of November.

**Require:****Compute the following**

- a. Raw Material Price variance
- b. Raw Material Usage variance.
- c. Direct labour rate variance
- d. Direct labour efficiency variance.

(08 Marks)

- iii. Kandy Trader's machining department has prepared the target for 2015 based on the following data:

|                           |                |
|---------------------------|----------------|
| Maximum capacity          | 50,000units    |
| Machine hours per unit    | 2 hours        |
| Variable factory overhead | Rs. 3 per hour |
| Fixed factory overhead    | Rs. 400,000    |

At the time the department prepared its budget, it expected to operate at 80 percent of the maximum capacity. The department uses machine hours apply to factory overheads and the firm has spent 88,000 machine hours and Rs. 600,000 in total factory overheads to manufacture 42,000 units.

**Required:**

**Calculate the following for the year 2015**

- Factory overhead application rate.
- Total flexible budget factory overhead for the operation in 2015.
- Production volume variance.
- Factory overhead efficiency variance.
- Variable and fixed factory overhead spending variances if the actual fixed factory overhead for the year was Rs. 375,000.

(12 Marks)

**(Total 25 Marks)**

**Question No. 04**

- Wimal, President of Trinco Traders, your client has recently attended a seminar at which a speaker discussed nature and control of capital expenditure, which he referred to as Capital Budgeting. Wimal inform you that he is not quite sure whether he understands that concepts discussed clearly. Then he asks you for briefing of the followings.
  - Explain the nature of capital budgeting and identify several of its uses.
  - What are the differences between the payback method and the net present value method of capital budgeting?
  - Define the *cost of capital*.
  - Financial accounting data are not partly suitable for use in capital budgeting. Explain.

(08 Marks)

- ii. Silva Group has the opportunity to enter into a joint venture which will give it a 49 percent ownership with local investors in a developing country. It would be required to invest the entire Rs. 50 million initial outlay needed for the venture. Expected net cash flows are Rs. 15 million yearly for 5 years. At the end of the fifth year, ownership will be handed over to the new investors. Cost of capital is 12 percent. Silva Group will accept projects only if its return on investment is more than 15 percent.

**Required:**

Should Silva Group invest in the project? Justify your decision.

(05 Marks)

- iii. Colombo Traders purchased a machine valued at Rs. 500,000 to manufacture specialty taps for electrical equipment. The owner, Kamal expects to sell its produce in the next 4 years. The government has exempted taxes from profits from new investments to encourage capital investments. The machine is expected to have a useful life of 4 years with no salvage value at the end of the period. Kamal uses straight-line method of depreciation. The net cash inflow is expected to be Rs. 200,000 each year for 4 years. Kamal uses 10 percent in evaluating capital investments.

**Required to calculate the followings**

- a. Payback period.
- b. Book rate of return based on average investment.
- c. Net present value.
- d. Discounted payback period.
- e. Internal rate of return.

(12 Marks)

**(Total 25 Marks)**

## Formula Sheet

The following variances are reported for both variable and absorption costing systems:

### *Materials and labour*

- 1 Material price variance = (standard price per unit of material – actual price) × quantity of materials purchased
- 2 Material usage variance = (standard quantity of materials for actual production – actual quantity used) × standard price per unit
- 3 Total materials cost variance = (actual production × standard material cost per unit of production) – actual materials cost
- 4 Wage rate variance = (standard wage rate per hour – actual wage rate) × actual labour hours worked
- 5 Labour efficiency variance = (standard quantity of labour hours for actual production – actual labour hours) × standard wage rate
- 6 Total labour cost variance = (actual production × standard labour cost per unit of production) – actual labour cost

### *Fixed production overhead*

- 7 Fixed overhead expenditure = budgeted fixed overheads – actual fixed overheads

### *Variable production overhead*

- 8 Variable overhead expenditure variance = (budgeted variable overheads for actual input volume – actual variable overhead cost)
- 9 Variable overhead efficiency variance = (standard quantity of input hours for actual production – actual input hours) × variable overhead rate
- 10 Total variable overhead variance = (actual production × standard variable overhead rate per unit) – actual variable overhead cost

### *Sales margins*

- 11 Sales margin price variance = (actual unit contribution margin\* – standard unit contribution margin) × actual sales volume  
(\*Contribution margins are used with a variable standard costing system whereas profit margins are used with an absorption costing system. With both systems, actual margins are calculated by deducting *standard* costs from actual selling price.)
- 12 Sales margin volume variance = (actual sales volume – budgeted sales volume) × standard contribution margin
- 13 Total sales margin variance = total actual contribution – total budgeted contribution
- 14 Fixed overhead volume variance = (actual production – budgeted production) × standard fixed overhead rate
- 15 Volume efficiency variance = (standard quantity of input hours for actual production – actual input hours) × standard fixed overhead rate
- 16 Volume capacity variance = (actual hours of input – budgeted hours of input) × standard fixed overhead rate
- 17 Total fixed overhead variance = (actual production × standard fixed overhead rate per unit) – actual fixed overhead cost