**PGDM, Batch 2017-19**
**Managerial Accounting**
**DM 206**
**Trimester – II, End-Term Examination: December 2017**

Time allowed: 2 Hrs 30 Min
Max Marks: 50

Roll No: ____________

**Instruction:** Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means.** All other instructions on the reverse of Admit Card should be followed meticulously.

**Sec A 15 Marks: Attempt 3 out of 5 questions, all questions carry five marks**

A1. How is Value chain analysis linked with cost management?

A2. The following information has been taken from the accounting records of Klear-Seal Corporation for last year:

| | |
|---|---|
| Selling expenses | $140,000 |
| Raw materials inventory, January 1 | $90,000 |
| Raw materials inventory, December 31 | $60,000 |
| Utilities, factory | $36,000 |
| Direct labor cost | $150,000 |
| Depreciation, factory | $162,000 |
| Purchases of raw materials | $750,000 |
| Sales | $2,500,000 |
| Insurance, factory | $40,000 |
| Supplies, factory | $15,000 |
| Administrative expenses | $270,000 |
| Indirect labor | $300,000 |
| Maintenance, factory | $87,000 |
| Work in process inventory, January 1 | $180,000 |
| Work in process inventory, December 31 | $100,000 |
| Finished goods inventory, January 1 | $260,000 |
| Finished goods inventory, December 31 | $210,000 |

Management wants these data organized in a better format so that financial statements can be prepared for the year.
Prepare a schedule of cost of goods manufactured, the cost of goods sold and income statement

A3. The profit for the year of R.J. Ltd. works out to 12.5% of the capital employed and the relevant figures are as under:

| | |
|---|---|
| Sales | Rs 5,00,000 |
| Direct Materials | Rs 2,50,000 |
| Direct Labour | Rs 1,00,000 |
| Variable Overheads | Rs 40,000 |
| Capital Employed | Rs 4,00,000 |

The new Sales Manager who has joined the company recently estimates for next year a profit of about 23% on capital employed, provided the volume of sales is increased by 10% and simultaneously there is an increase in Selling Price of 4% and an overall cost reduction in all the elements of cost by 2%. Required Find out by computing in detail the cost and profit for next year, whether the proposal of Sales Manager can be adopted. 15

QA4. How are period costs different than product costs? Cite example/s.

QA5. Explain in detail the concept of kaizen costing?

**Sec B 20 Marks: Attempt 2 out of 3 questions, all questions carry ten marks**

**B1.** Having attended a course on activity-based costing (ABC) in your MBA program, 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 for one period:

| Product | A | B | C | D |
|---|---|---|---|---|
| Output in units | 120 | 100 | 80 | 120 |
| Costs per unit: | (£) | (£) | (£) | (£) |
| Direct material | 40 | 50 | 30 | 60 |
| Direct labour | 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 analyzed as follows:

| | (£) |
|---|---|
| Machine department costs (rent, business rates, depreciation and supervision) | 10430 |
| Set-up costs | 5250 |
| Stores receiving | 3600 |
| Inspection/Quality control | 2100 |
| Materials handling and dispatch | 4620 |

You have ascertained that the 'cost drivers' to be used are as listed below for the overhead costs shown:

| Cost | Cost Driver |
|---|---|
| Set up costs | Number of production runs |
| Stores receiving | Requisitions raised |
| Inspection/Quality control | Number of production runs |
| Materials handling and dispatch | 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.
You are required:
(a) to calculate the total costs for each product if all overhead costs are absorbed on a machine hour basis; (5 marks)
(b) to calculate the total costs for each product, using activity-based costing; (10 marks)

**B2.** Thorne Co. values, advertises and sells residential property on behalf of its customers. The company has been in business for only a short time and is preparing a cash budget for the first four months of 2013. Expected sales of residential properties are as follows.

| | 2012 | 2013 | 2013 | 2013 | 2013 |
|---|---|---|---|---|---|
| Month | December | January | February | March | April |
| Units sold | 10 | 10 | 15 | 25 | 30 |

The average price of each property is £180 000 and Thorne Co. charges a fee of 3 per cent of the value of each property sold. Thorne Co. receives 1 per cent in the month of sale and the remaining 2 percent in the month after sale. The company has nine employees who are paid on a monthly basis. The average salary per employee is £35 000 per year. If more than 20 properties are sold in a given month, each employee is paid in that month a bonus of £140 for each additional property sold.

Variable expenses are incurred at the rate of 0.5 per cent of the value of each property sold and these expenses are paid in the month of sale. Fixed overheads of £4300 per month are paid in the month in which they arise. Thorne Co. pays interest every three months on a loan of £200 000 at a rate of 6 per cent per year. The last interest payment in each year is paid in December.

An outstanding tax liability of £95 800 is due to be paid in April. In the same month Thorne Co. intends to dispose of surplus vehicles, with a net book value of £15 000, for £20 000. The cash balance at the start of January 2012 is expected to be of £40 000.

Required:

Prepare a monthly cash budget for the period from January to April. Your budget must clearly indicate each item of income and expenditure, and the opening and closing monthly cash balances

**B3.** What are the various measures for assessing the financial performance of divisions? Discuss about all the measures in detail and recommend one method on the basis of its advantages.

## Sec C 15 Marks: Compulsory Case study

The Rogatec Company produces a wide range of footwear from factories which are located in several countries. The main product of its most recently built production facility, the Rayong factory in Thailand, is the "Wayfarer", a waterproof walking boot that has an international reputation for comfort, reliability and durability. This boot is manufactured from waterproof fabric and treated rubber that have been purchased by the Rayong factory from local Thai suppliers. Pairs of boots are boxed at the Rayong factory and then shipped to strategically located depots for onward distribution to Rogatec customers. These distribution depots are located in the UK, Germany, the USA, the Netherlands, Canada and Brazil.

Since Rogatec is keen to keep manufacturing costs low, the Management Accountant of the Rayong factory, Sama Samara, has recently introduced a standard costing system. He hopes that the standard costing system will help him to generate control information, so that he can quickly advise the Production Manager, Rand Warjh, when corrective action is called for. He also hopes that it will enhance his reputation with the Rayong Factory Manager, Jak Dart, and lead to an increase in his salary.

The standards that Sama had determined for December were as follows:

<u>**Standards for December**</u>

| | |
|---|---|
| **Factory Output** | |
| Wholesale Selling Price: | Rs 40.00 per pair |
| Production and Sales: | 150,000 pairs |
| **Materials:** | |
| Waterproof Fabric: | 0.5 metres per pair at Rs 26.00 per metre |
| Treated Rubber: | 0.25 metres per pair at Rs3 0.00 per metre |
| **Labour** | |
| Cutting Department: | 2 hours per 100 pairs at Rs 2.80 per hour |
| Sewing Department: | 1.5 hours per 100 pairs at Rs 3.30 per hour |
| Finishing Department: | 1 hour per 100 pairs at Rs 3.00 per hour |

Fixed overheads for December had been estimated to be Rs 1,250,000, of which Rs 750,000 were fixed production overheads and Rs 500,000 were administration and distribution costs. In line with the wishes of Jak Dart, fixed production overheads are not currently absorbed into the product costs.

18

December was a difficult month for Jak Dart. The workers employed at the Rayong factory were almost all female and they had instructed their senior representative, Mara Maya, a young Sewing Department operative, to put before Jak a demand for higher wages. Because of the pressure from the production director of the parent company, Jak had refused this demand; with the result that industrial action was now being threatened by Mara and other representatives.

A television documentary on labour exploitation in the Far East had also been in production at the time and Mara and other workers had taken part. They had told of how they struggled to manage with the wages they received and had been filmed, not only in their own homes, but also at work in the factory. The filming within the factory had taken place secretly, since Jak had refused to give permission for the documentary team to visit the premises, and the programme was rumoured to contain footage of Mara's children packing Wayfarer boots into boxes in the Finishing Department. Jak had heard that the programme was to be shown in the UK in March.

Jak had also heard in December that the government of Thailand were considering an investigation of a mystery illness contracted by some of the workers in the Cutting Department. This illness, publicised by the local press, was rumoured to be caused by a waterproofing chemical that required careful handling, but Rand had already investigated these rumours and reported to Jak in early January that there was no evidence to support them. At the same meeting with Jak, Rand reported that he had been unable to meet production targets because of the unrest among the workers. He claimed that he had, though, been able to cut costs substantially.

Rand has told Jak and Sama that the budget must be changed if he is going to be expected to meet production targets in the future. He has explained that the workers are unhappy that Rogatec has refused their demand for higher wages and he suspects that they have found ways of expressing their dissatisfaction. For example, machine breakdowns have increased and days off through illness have risen. Rand also expects that raw material prices will rise because of political demands in Thailand for a minimum wage and that this will make it difficult for him to control production costs.

Sama has accumulated the following information for December.

**<u>Actual Data for December</u>**

| | |
|---|---|
| **Factory Output** | |
| Wholesale Selling Price: | 45.00 per pair |
| Production and Sales: | 136,000 pairs |
| **Materials** | |
| Waterproof Fabric: | 61,200 metres costing Rs 1,713,600 |
| Treated Rubber: | 31,280 metres costing Rs 907,120 |
| **Labour** | |
| Cutting Department: | 2,040 hours at Rs 2.40 per hour |
| Sewing Department: | 2,040 hours at Rs 3.10 per hour |
| Finishing Department: | 2,040 hours at Rs 2.50 per hour |
| **Fixed Overheads** | |
| Production Overheads: | Rs 700,000 |
| Administration and Distribution: | Rs 600,000 |

Sama is ready to analyse the data for December, but is also thinking about Rand's concerns about the budget for the year.

**Required**

a) Calculate the following variances and Suggest possible causes for the variances for December:

i. Direct material price and usage variances for waterproof material and treated rubber;

ii. Direct labour and efficiency variances for the Cutting, Sewing and Finishing Departments.

iii. Fixed overhead variance

b) Prepare a statement which reconciles actual profit with the flexed standard profit figure.