KUMARAGURU
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Register Number:……..

**MBA DEGREE EXAMINATIONS: JAN 2015**

(Regulation 2012)

Second Semester

**MASTER OF BUSINESS ADMINISTRATION**

MBA624: Operations Management

**Time: Three Hours** **Maximum Marks: 100**

**Case Study:-**
**PART A (1 x 20 = 20 Marks)**

1. Bulchand & Co. company inventories 20 items. The company decided to setup an ABC inventory system with 10 % of A items, 20% of B items and70% of C items. The company records provides the information, which is as follows

| Item Code | Annual usage in units | Cost per unit (Rs) |
|---|---|---|
| G | 2,500 | 150 |
| H | 15,000 | 90 |
| I | 12,000 | 100 |
| J | 8,000 | 50 |
| K | 1,00,000 | 50 |
| L | 25,000 | 300 |
| M | 80,000 | 500 |
| N | 2,000 | 300 |
| O | 3,000 | 70 |
| P | 10,000 | 75 |
| R | 6,000 | 20 |
| S | 20,000 | 90 |
| T | 1,20,000 | 350 |
| V | 20,000 | 200 |
| W | 1,500 | 350 |
| X | 4,000 | 100 |
| Y | 4,500 | 200 |
| Z | 7,000 | 40 |

Questions:-

a) Analyze the above items into ABC categories on the basis of information and prepare a report showing your findings with comment. (10)

b) Discuss various types of inventory control techniques and its importance in manufacturing industries. (10)

**Answer All Questions**
**PART B (10 x 2 = 20 Marks)**

2. Define production and operations management.
3. State the benefits of computer integrated manufacturing system.
4. What is meant by aggregate planning?
5. Define line balancing and why it is required?
6. What is pipe line inventory?
7. Differentiate design capacity and system capacity
8. What are the assumptions of johnson rule?
9. How would you calculate the expected time and variance in the PERT model?
10. Expand CORELAP and CRAFT
11. Differentiate time study and method study

**PART C (4x 15 = 60 Marks)**

12. a) Discuss various types of production system with industrial examples.

**(OR)**

b) Discuss the various inputs for Material Requirements Planning system with MRP diagram.

13. a) Discuss the various types of material handling equipments with diagrams.

**(OR)**

b) The Production particulars of a company for 12 years of operations is furnished below:

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | 96 | 106 | 92 | 114 | 108 | 98 | 99 | 115 | 106 | 91 | 102 | 99 |

(i) Fit a regression equation for the above date & Forecast for the 13th year.

(ii) Use 3 Month Moving average to forecast production for the 13th year.

14. a) Consider the following three machines and four jobs flow shop scheduling problem. Using Johnson's Algorithm, Obtain the optimal sequence which will minimize the make span. Find idle time and also draw Gantt chart.

| **Job** | **A** | **B** | **C** | **D** | **E** |
|---|---|---|---|---|---|
| **Machine 1** | 10 | 8 | 15 | 7 | 12 |
| **Machine 2** | 6 | 4 | 3 | 2 | 5 |
| **Machine 3** | 8 | 11 | 6 | 10 | 9 |

**(OR)**

b) Discuss the importance of scheduling in project management and differentiate PERT and CPM.

15. a) Explain the types of Layouts with a suitable example and also list out the factors and methods of evaluating a location decision?

**(OR)**

b) (i) List the various work measurement techniques.

(ii) Explain the procedure to carry out a work measurement study in an organization.

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