

END TERM EXAMINATION**FIFTH SEMESTER [BBA] DEC.2014 – JAN.2015****Paper Code: BBA-305 Subject: Production and Operation Management****Time: 3 Hours****Maximum Marks: 75****Note: Attempt any five questions in all. Select atleast two questions from each section.****SECTION-A**

- Q1 (a) Discuss different types of production systems with suitable examples. (8)
 (b) Define Productivity. Briefly discuss different ways of Improving productivity. (7)
- Q2 Discuss atleast one international and one national level quality awards highlighting- (15)
 (a) Organization/agency which instituted the awards.
 (b) Objective
 (c) Application and evaluation process.
 (d) Winners in the recent times.
- Q3 (a) List and explain different types of costs in Inventory system. (8)
 (b) What is the difference between single sampling plan and double sampling plan? (7)
- Q4 (a) What are the factors affecting plant location? Explain with examples. (5)
 (b) Explain the steps in obtaining ISO 9001:2008 certification. (5)
 (c) What are some useful suggestions for managing queues that go beyond the quantitative waiting line models? (5)

SECTION-B

- Q5 (a) Briefly explain the purpose and concept of line of Balance. (5)
 (b) Potential locations A, B and C have the cost structure as shown below to producing a product expected to sell for Rs. 3250 per unit. Find the most economical location for an expected volume of 2750 units per year. (10)

| Site | Fixed cost/year (Rs.) | Variable cost/year (Rs.) |
|------|--------------------------|-----------------------------|
| A | 65,00,000 | 1200 |
| B | 75,00,000 | 560 |
| C | 55,00,000 | 4250 |

- Q6 (a) Annual demand for an item is 5400 units. Ordering cost is Rs. 600 per order. Inventory carrying cost is 30% of the purchase price per unit per year. The price breaks are as shown below.

| Quantity | Price (Rs.) |
|----------------------|-------------|
| $0 \leq Q_1 < 2400$ | 12 |
| $2400 \leq Q < 3000$ | 10 |
| $3000 \leq Q$ | 8 |

Find the optimal order size.

(10)

P.T.O.

(b) What are the different types of layout? Explain them with examples.(5)

Q7 Write short note on **any three** of the following:- (5x3=15)

- (a) KAIZEN
- (b) POKA-YOKE
- (c) SIX SIGMA
- (d) BENCH-MARKING

Q8 (a) The following table gives the numbers of defects in a casting used for making crank case of a diesel engine. (9)

| Casting No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------|----|----|----|----|----|----|----|----|----|----|
| No. of defects | 15 | 11 | 25 | 10 | 12 | 20 | 15 | 10 | 17 | 13 |

Construct a suitable control chart with 3-sigma limits and comment on the casting process.

(b) What are the cost of Quality? Briefly explain each. (6)