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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. (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.
 (c) What are some useful suggestions for managing queues that go beyond the quantitative waiting line models?
 (5)

SECTION-B

(a) Briefly explain the purpose and concept of line of Balance.
 (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.

| Site | Fixed cost/year (Rs.) | Variable cost/year (Rs.) | | | | |
|------|-----------------------|--------------------------|--|--|--|--|
| A | 65,00,000 | 1200 | | | | |
| В | 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≤Q ₁ <2400 | 12 10 | | | |
| 2400≤ Q <3000 | | | | |
| 3000≤ Q | 8 | | | |

Find the optimal order size.

(10)

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- (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 .
- Vd) 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)

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