SVKM's NMIMS
School of Distance Learning

Programme: DSCM / PGDSCM

Academic year: 2012 – 2013
Subject: Operations Management

Semester: II
Course: New
Marks 70

Date: 16.07.2012
Time: 11.00 a.m. to 2.00 p.m.

Instructions:

Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer book, which is provided for their use.

NB:

1. All 4 questions are compulsory.
2. Candidates should attempt questions as per the internal options available.

Q.1. Attempt any two out of four **(10 Marks)**

a) Explain: Small q V/s Big Q

b) Explain ABC Analysis

c) Explain the importance of forecast for a production manager.

d) Explain Group Technology

Q.2. Write Short Notes on any two out of five **(10 Marks)**

a) KANBAN

b) Product Development Process

c) Merits and demerits of "Product Layout"

d) How mass production differs from batch production?

e) Constraints Management

Q.3. <u>Discuss any three out of five</u> **(30 Marks)**

a) TQM

b) Mention 10 quality system requirements as per ISO 9000. Briefly explain any 3 of it.

c) Total Productivity Maintenance.

d) Computer Integrated Manufacturing

e) MRP II

Q.4. <u>Answer the Following:</u> **(20 Marks)**

a) Following data is for regular consumption of raw material:
Annual requirement – 12000 units, Ordering cost – Rs. 10/- per order, Inventory holding cost – Rs. 1/- per unit per year

(i) Calculate: EOQ Number of orders per year, Stock Cycle (time period between two inventory receipts)

(ii) Calculate the ROP(Reorder point under following scenarios)

1) Lead time of the raw material = 1 week
2) Lead time of the raw material = 3 weeks
3) Lead time of the raw material = 5 weeks

b) ABC company is currently producing an industrial item that has a variable cost of Rs. 1.5/- per unit and a selling price of Rs. 3.75/- per unit. Fixed costs are Rs. 20000/- per year. The current volume of production and sale is 40,000 units per year.
The company can produce a better product by adding new equipment in the assembly line Which would increase the fixed cost by Rs. 5000/- per year. The variable cost would decrease by 0.25 per unit. The volume for the new improved product should rise to 50000 units per year Which can be sold in the market without any problem.

(i) Should the company invest in the new equipment?

(ii) At what volume the equipment choice change?

(iii) At the Volume of 15000 units per year, which process should be used?

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