Code: 9A03801

R09

B.Tech IV Year II Semester (R09) Advanced Supplementary Examinations, July 2013
PRODUCTION AND OPERATIONS MANAGEMENT
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1   (a)   List out functions of PPC.
    (b)   Define and differentiate between production and productivity.

2   (a)   What are the fundamental assumptions in forecasting?
    (b)   Determine trend forecast for the following and compute forecast for the year 2010.

Period	2001	2002	2003	2004	2005	2006	2007
Demand	16	14	10	18	16	20	24

3   Discuss in detail factors to be considered for the section of site for setting up steel plant.

4   Define and discuss in detail various methods of aggregate planning.

5   (a)   List out assumptions in EOQ model.
    (b)   Demand for an inventory is expected to be 96,000 per year. Inventory carrying cost is estimated at Rs.10 per unit per year, while ordering cost is Rs.75 per order. If the company operates for 240 days in a year, determine:
        (i)   EOQ
        (ii)   Total cost
        (iii)   Optimum number of orders per year
        (iv)   Cycle time

6   (a)   Define SM Johnson's rules in scheduling.
    (b)   Determine total elapsed time for the following:

Jobs	J1	J2	J3	J4	J5	J6
M/C-I	8	12	14	9	6	12
M/C-II	6	10	16	6	8	10
M/C-III	10	8	12	7	9	14

7   (a)   Define and discuss in detail inputs and outputs of MRP.
    (b)   What is ERP?
    (c)   Discuss various ERP packages.

8   Write short notes:
    (a)   Just in time concept
    (b)   Tools for total quality

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