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Total number of printed pages – 3

MBA

MBA 204 (New)

Second Semester (Back) Examination – 2013

PRODUCTION AND OPERATIONS MANAGEMENT

QUESTION CODE : B588

Full Marks – 70

Time : 3 Hours

Answer Question No. 1 which is compulsory and any **five** from the rest.

The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2 × 10
 - (a) What are the different responsibilities of a production manager ?
 - (b) What are the different basic functions involved in production, planning and control cycle ?
 - (c) What are the different strategic alternatives used in aggregate planning ?
 - (d) Differentiate between service and manufacturing.
 - (e) What are the different allowances used in time study ?
 - (f) What are limitations of product layout ?
 - (g) Differentiate between CPM and PERT.
 - (h) What are the different inputs of material requirement planning ?
 - (i) What are the different errors involved in acceptance sampling ?
 - (j) Define EOQ.
2. (a) Explain the meaning and significance of plant location .How will you decide the location of a mini steel plant in Orissa. 5
 - (b) Differentiate between product and process layout. 5
3. (a) Explain the different basic strategies involved in the capacity planning. 5
 - (b) A time study was made of an existing job to develop new time standard. A worker was observed for 60 minutes. During that period, 40 units are produced. The analysis rated the worker as performing at a 90%



P.T.O.

performance rate. Allowance in the firm for rest and personal time are 12 percent. 5

- (i) What is the normal time for the task ?
- (ii) What is the standard time for the task ?
- (iii) If the worker produces 300 units in an eight hour day, what would be the day's pay if the rate was Rs. 6 per hour and the premium payment system paid on a 100 percent basis.

4. What are the different strategies of production and operation management (POM)? Discuss the similarities between manufacturing and service. Explain the different functions of POM. 10

5. (a) Differentiate between production and productivity. What are the factors affecting productivity? Discuss. 5

(b) Find the best location using Centroid method of a warehouse serving retail stores in : Bhubaneswar (50, 60), Berhampur (20, 35) and Cuttack (160, 50). 5


Monthly demand is :

Bhubaneswar – 494 units

Berhampur – 18 units

Cuttack – 171 units respectively.

6. Srish Tool Company produces slip-ring bearings, which look like flat doughnuts or washers. They fit around shafts or rods, such as drive shafts in machinery or motors. In the production process for a particular slip-ring bearing the employees have taken 10 samples (during a 10-day period) of 5 slip ring bearing. The individual observations from each sample are shown as follows



Sample	1	2	3	4	5
1	5.02	5.01	4.94	4.99	4.96
2	5.01	5.03	5.07	4.95	4.96
3	4.99	5.00	4.93	4.92	4.99
4	5.03	4.91	5.01	4.98	4.89
5	4.95	4.92	5.03	5.05	5.01
6	4.97	5.06	5.06	4.96	5.03
7	5.05	5.01	5.10	4.96	4.99
8	5.09	5.10	5.00	4.99	5.08
9	5.14	5.10	4.99	5.08	5.09
10	5.01	4.98	5.08	5.07	4.99

Draw X-bar and R-chart to monitor the process variability. 10

7. (a) What is TQM ? Briefly discuss the principles associated with TQM. 5
(b) Discuss briefly the interaction between product and process design. 5
8. Write notes on : 2.5×4
- (a) Principles of motion economy
 - (b) Vertical integration
 - (c) Total productive maintenance
 - (d) FMS.
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