

Name :

Roll No. :

Invigilator's Signature :

CS / MBA(NEW) / SEM-3(PT) / MB-204 / 2010-11

2010-11

PRODUCTION & OPERATION MANAGEMENT

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : $10 \times 1 = 10$
 - i) Which of the following is not a benefit of MRP-II ?
 - a) Increase in inventory
 - b) Better customer service
 - c) Better planning
 - d) Increase in productivity.
 - ii) Work measurement is done for
 - a) fixing a standard time for a job
 - b) stream lining a method
 - c) ensuring high productivity
 - d) none of these.



iii) If annual requirement is 2400 units of items, ordering cost is Rs. 40 per order and EOQ is 30 then annual procurement cost is

- a) Rs. 2,400
- b) Rs. 3,200
- c) Rs. 60
- d) Rs. 2,000.

iv) After inspection of 10 rods each of length 5 metres the following number of defects is found on each rod :

20, 22, 23, 25, 28, 30, 22, 20, 21, 23

The control chart suitable will be

- a) *R*-chart
 - b) *C*-chart
 - c) *P*-chart
 - d) a combination of *R*-chart and *P*-chart.
- v) *ABC* classification of materials is based on
- a) the annual consumption value of materials
 - b) the self-life of materials
 - c) the frequency of consumption of materials
 - d) the importance of materials during production stage.



- vi) The concept of “zero defects” was developed by
- a) Edward W Deming
 - b) Kaoru Ishikawa
 - c) Armand Feignbaum
 - d) Philip B Crosby.
- vii) TPM is a technique for keeping
- a) machines in good working condition
 - b) process under control
 - c) quality under control
 - d) none of these.
- viii) Manufacturing of jigs and fixtures is undertaken by
- a) jobbing production
 - b) batch production
 - c) mass and flow production
 - d) process production.



- ix) Kaizen is built on
- a) QFD process b) FMEA
- c) cause-effect d) PDCA.
- x) The most befitting probability density function chosen for PERT activity is the
- a) Normal distribution b) Poisson distribution
- c) Beta distribution d) Binomial distribution.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. State clearly the difference between PERT and CPM.
3. Differentiate between *Q*-system and the *P*-system of inventory management.
4. Explain briefly the scope of maintenance management. Give example.
5. As a production manager, state the reasons why you need a good plant location. What factors should be considered while selecting a suitable location of a plant ?
6. State the difference between production and productivity. What are the different methods of increasing productivity ?



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

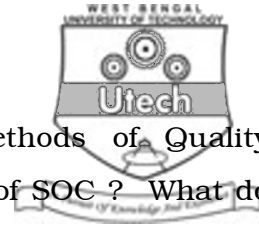
7. a) What are the various cost associated with inventory management ? Explain why ordering costs decrease with increase in inventory. 6

b) An auto industry purchases spark plugs @ Rs. 25 each. The annual requirement is 18000 nos. If the ordering cost is Rs. 250 per order and carrying cost is 25% per annum, what would be the EOQ ? If the supplier of the spark plugs offers a discount of 5% per each order quantity of 3000 numbers or more, would you advise the acceptance of this offer and orders placed in lots of 3000 only ? 9

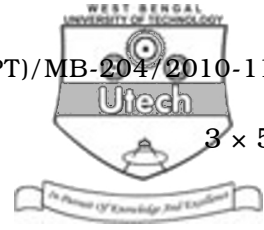
8. a) There are 5 jobs each of which must go 2 machines A and B :

Job	1	2	3	4	5
Machine A	5	1	9	3	10
Machine B	2	6	7	8	4

Determine a sequence for 5 jobs that will minimize the total elapsed time. 6



- b) When will you use statistical methods of Quality Control ? What are the advantages of SOC ? What do you understand by the term "Acceptance Sampling" ? Explain the terms AQL and LTPD. What is the difference between Producer's Risk and Consumer's Risk ? 9
9. a) Explain why purchasing is considered to be a very important function of production and operations management. 3
- b) Distinguish between a limited tender and an open tender. 3
- c) State the purchase procedure of a medium size engineering enterprise starting from the placement of requisition for materials to the release of payment. 9
10. a) Enumerate the various steps for method study . 5
- b) State the differences between method study and work measurement. 5
- c) An 8 hours work measurement study in a plant reveals the following :
- Units produced = 320 nos. Idle time is 15%.
Performance rating = 120% of normal time. Determine the standard time per unit produced. 5



11. Write notes on any *three* of the following :

3 × 5

- a) MRP II
- b) Quality circle
- c) TQM
- d) Motion and time study
- e) Reordering level
- f) ABC analysis.

