

**M.Sc. IN CREATIVE DESIGN CAD / CAM
(MSCCRD)**

00265

Term-End Examination

December, 2014

MFW-048 : MANAGEMENT - III

Time : 3 hours

Maximum Marks : 70

Note : *Attempt any seven questions. All questions carry equal marks. Use of scientific calculator is permitted.*

1. Explain the importance of process selection in system with the help of a suitable example. 10

2. What is buffer stock ? List the reasons for keeping buffer stock. Suppose the lead time for procurement of a product gets doubled; will you recommend doubling its buffer stock ? Justify your answer. 10

3. Given below are the values of y for certain values of x . Find the equation of the regression line which describes the relation between x and y . Hence estimate the value of y , when $x = 24$.

10

Table :

x	y
2	13
4	17
6	24
8	27
10	28
12	33
14	35
16	41
18	43
20	51

4. A time study was made of an existing job to develop new time standards. A worker was observed for 45 minutes. During that period, 30 units were produced. The analyst rated the worker as performing at a 90 percent performance rate. Allowance in the firm for rest and personal time are 12 percent :

- (a) What is the normal time for the task ?
(b) What is the standard time for the task ?

10

5. A small firm intends to increase the capacity of a bottleneck operation by adding a new machine. Two alternatives A and B, have been indentified, and the associated costs and revenues have been estimated. Annual fixed costs would be ₹ 4,00,000 for A and ₹ 3,00,000 for B; variable costs per unit would be ₹ 100 for A and ₹ 120 for B; and revenue per unit would be ₹ 150 for A and ₹ 160 for B.
- (a) Determine each alternative's break-even point in units.
- (b) At what volume of output would the two alternatives yield the same profit ? 10
6. How is capacity measured ? Discuss the steps taken in calculating capacity. Name some modelling techniques used in calculation of capacity. 10
7. Explain the various factors to be considered to decide the location of a footwear plant. How do the factors differ in case of a nuclear plant ? 10
8. Distinguish between method study and time study. Explain the steps of time study. Compare and contrast time study and work sampling. 10

- 9.** What is outsourcing ? How could outsourcing be used to increase the capacity ? Discuss with the help of suitable examples. *10*
- 10.** Define productivity. Mention different measures for checking productivity. Write down the measures to increase the productivity. *10*
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