Anjuman-i-Islam's Kalsekar Technical Campus, New Panvel

Unit Test-1

Subject: Production Planning & Control

Marks: 20

Class: B.E. ME.E -I– and B.E. M.E. - II hour

Time: 1

Q.1. Attempt any four of the following five questions: (2marks x 4 = 8 marks)

a. Why do firms carry inventories? — CO3

b. What are the assumptions made in the basic EOQ model? — CO3

c. What is meant by MRP? — CO4

d. What is the procedure for conducting ABC analysis? — CO3

e. What is meant by a Critical Path? — CO1

Q.2. Attempt any two of the following three questions: (6 marks x 2 = 12 marks)

a. The data for the activities of a project and their duration in days required are given in the table below.

Activities	1-2	1-3	2-6	3-4	3-5	4-6	5-6	5-7	6-7
Duration	4	6	8	7	4	8	5	19	10

Draw the network diagram.
Determine the paths from the start node 1 to the completion node 7 and their lengths.
Determine which one is the longest path? What is this longest path called? — CO1

b. Complete the MRP for an item X shown below. The item has an independent demand and a safety stock of 40 is maintained. — CO4

Order qty. = 70	Week											
Lead time = 4 weeks	1	2	3	4	5	6	7	8	9	10	11	12
Safety Stock = 40												
Projected requirement	20	20	25	20	20	25	20	20	30	25	25	25
Receipts		70			70			70			70	
On hand at the end of period (65)												
Planned order release												

c. A company uses 75 numbers of an item per month. Each item costs the company Rs. 25. The cost of putting through each order is Rs. 36. The inventory carrying charge per month is 1.5 % of the average inventory investment. In what economic lots the item should be purchased to minimize the annual total cost? — CO3