

Yogesh
28.04.2016

(Set-R₁)

B.Tech - 6th
Production and Operation Management

Full Marks : 70

Time : 3 hours

Answer any six questions including Q. No. 1

The figures in the right-hand margin indicate marks

1. Answer *all* the following questions in brief : 2 × 10
- (i) What is productivity index ?
 - (ii) Name four examples of process-focussed production system.
 - (iii) Which time series method of forecasting does give weightage to all the past sales data ?
 - (iv) What is a causal method of forecasting ?
 - (v) Which type of plant layout is commonly followed in a rolling mill ?

(Turn Over)

(2)

- (vi) What is normal time ?
- (vii) Define motion study.
- (viii) Define dispatching.
- (ix) Define balance delay.
- (x) Define CIM.

2. Explain the awareness, improvement and maintenance processes with reference to productivity. 10

3. Forecast the demand for the month of May using (i) three-month simple moving average method and (ii) basic exponential smoothing method with a constant of 0.2 and forecast for April as 5 for the following sales data for an item. 10

Month	Jan	Feb	Mar	Apr
Sales	4	5	3	6

4. Why are most of the sponge iron plants located in Western Odisha ? Discuss. 10

(3)

5. Explain the principles of motion economy related to the use of human body. 10

6. Define aggregate planning. Discuss various strategies adopted in production planning at aggregate level. 10

7. Construct the network and find critical path for the project schedule with the following time durations : 10

Activity	1-2	1-3	2-4	2-5	3-4	3-6	4-7	5-7	6-7
Duration (in hour)	8	10	6	3	3	7	5	2	8

8. Write short notes on any two : 5 × 2

- (i) JIT
- (ii) Kaizen
- (iii) Supply chain.