PAPER ID-310313

Roll No: | | | | | | | | | | | | | |

B. TECH.
(SEM. V) THEORY EXAMINATION 2020-21
INDUSTRIAL ENGINEERING

Time: 3 Hours ***Total Marks: 100***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

Qno.	Question	Marks	CO
a.	What do you mean by productivity?	2	1
b.	Differentiate between 'mass production and 'job production' systems.	2	1
c.	Differentiate between routing and scheduling.	2	2
d.	Explain the Dummy activity in network diagram.	2	2
e.	How will you control the inventories of a manufacturing organization?	2	3
f.	What are the customer's behaviors in queuing system?	2	3
g.	Define work study.	2	4
h.	Define method and motion study.	2	4
i.	What are the limitations of Graphical method?	2	5
j.	What is sensitivity analysis?	2	5

SECTION B

2. Attempt any *three* of the following:

Qno.	Question	Marks	CO
a.	Is production management is different from operation management? Describe the intermittent and continuous production system.	10	1
b.	Write short note on techniques of forecasting.	10	2
c.	What is ABC analysis? Why is it necessary? What are basic steps in implementing it?	10	3
d.	Define 'Work Study' and state its objectives. Differentiate between 'Method Study' and 'Work Measurement'.	10	4
e.	Explain the general structure of a transportation problem.	10	5

SECTION C

3. Attempt any *one* part of the following:

Qno.	Question	Marks	CO
a.	Name various kinds of layouts. Describe, with example, principles of a good plant layout.	10	1
b.	Discuss principle of material handling and explain classification of material handling equipment.	10	1

4. Attempt any *one* part of the following:

Qno.	Question	Marks	CO
a.	Write short note on: i) MRP-I and MRP-II ii) JIT	10	2

b.	A project schedule has the following characteristics: Construct the network and find the critical path.	10	2

Activity	Time(weeks)	Activity	Time(weeks)
1 - 2	4	5-6	4
1 - 3	1	5-7	8
2-4	1	6-8	1
3-4	1	7-8	2
3-5	6	8-10	5
4-9	5	9-10	7

5. Attempt any *one* part of the following:

Qno.	Question	Marks	CO
a.	What do you understand by a queue? Give some important applications of queuing theory.	10	3
b.	The annual demand for an item is 3200 parts. The unit cost is Rs. 6 and the inventory carrying charges are estimated as 25% per annum. If the cost of the one procurement is Rs. 150, find: (i) Economic order quantity, (ii) Numbers of order per year, (iii) The optimal cost.	10	3

6. Attempt any *one* part of the following:

Qno.	Question	Marks	CO
a.	Who is referred as the father of scientific management? What are the principles and goal of scientific management?	10	4
b.	Discuss any two methods of job evaluation in detail.	10	4

7. Attempt any *one* part of the following:

Qno.	Question	Marks	CO
a.	Write short note on simulation.	10	5
b.	Solve the following linear programming problem by Simplex method: Maximize $z = 3x_1 + 2x_2$ subject to $2x_1 + x_2 \leq 40$ $2x_1 + 3x_2 \leq 60$ $x_1 + x_2 \leq 24$ and $x_1, x_2 \geq 0$	10	5