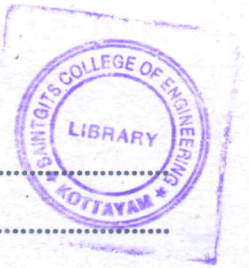


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Reg. No.....

Name.....



**B.TECH. DEGREE EXAMINATION, NOVEMBER 2014**

**Eighth Semester**

Branch : Mechanical Engineering

**PRODUCTION PLANNING AND CONTROL (M)**

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours

Maximum : 100 Marks

**Part A**

*Answer all questions.*

*Each question carries 4 marks.*

1. Why production planning and control is needed ?
2. Write a note on sales forecasting.
3. Explain objectives of production planning.
4. Explain procedures of routing.
5. Explain how scheduling and type of process are related.
6. Explain Johnson's rule of scheduling.
7. What is the role of IT in material management ?
8. Explain inventory activities.
9. Explain master scheduling.
10. Explain rules of dispatching.

(10 × 4 = 40 marks)

**Part B**

*Answer all questions.*

*Each question carries 12 marks.*

11. (a) Explain the functions and problems of product planning and control.

*Or*

**Turn over**

- (b) Compute a linear trend line for the following data and check if it is more accurate than exponential smoothing and adjusted exponential smoothing forecasts. Take  $\alpha = 0.5$  and  $\beta = 0.35$ .

Period	1	2	3	4	5	6	7	8	9	10	11	12
Demand	35	38	41	34	44	51	43	44	50	58	52	51

12. (a) Explain capacity planning process planning and material requirements planning.

Or

- (b) Explain principle and procedure of production control.

13. (a) Find the optimal sequence and the corresponding make span for the following 3 machine and 5 job problem :

Job	Machine 1	Machine 2	Machine 3
1	10	12	14
2	12	10	20
3	16	6	12
4	12	8	18
5	20	10	8

Or

- (b) Explain the solution to sequencing  $n$  jobs through two machines and three machines.

14. (a) Explain components of supply chain management.

Or

- (b) What is ERP ? Explain its role in production management and control.

15. (a) Explain the objectives of loading and scheduling. Explain some scheduling methods.

Or



- (b) Use CPM to the following sequence of activities. Draw the network diagram and find shortest time needed to complete the work.

Activity	Duration	Predecessors
A	7	–
B	8	–
C	4	–
D	9	A, B
E	10	C
F	5	D
G	7	F
H	8	D, E
I	8	D
J	4	H
K	3	I, J
L	1	J
M	8	L
N	9	K, M



(5 × 12 = 60 marks)