

Code: ME712

**IV B.Tech - I Semester – Regular Examinations – November 2015****PRODUCTION PLANNING & CONTROL  
(MECHANICAL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) State the Different objectives of production planning & control 6 M
- b) Explain various types of production systems. 8 M
2. a) Explain Different types of patterns in Forecasting. 6 M
- b) A computer software firm has experienced the following demand for its “Personal finance” software package. 8 M

period	1	2	3	4	5	6	7	8
units	56	61	55	70	66	65	72	75

Develop an exponential smoothing forecast using  $\alpha=0.4$  and  $\beta=0.20$

3. Explain the Following Techniques
- a. ABC analysis 5 M
- b. VED analysis 5 M
- c. Different Inventory control systems 4 M

4. a) What is ERP? State the advantages of ERP. 5 M
- b) Explain the concept of MRP-1 with a neat sketch. 6 M
- c) Explain the concept of KANBAN system. 3 M
5. a) Define Routing. State the factors that affect the routing procedure. 5 M
- b) State the information required on route sheet. 5 M
- c) Explain “Bill of Material”. 4 M
6. a) Explain various Scheduling Techniques. 8 M
- b) Three jobs go over three machines M1, M2 and M3 in that order. From the data given below, find the sequence that minimizes the total elapsed Time and find the minimum time. 6 M

Machines	Jobs		
M1	2	Job2	Job3
M2	8	3	4
M3	4	7	2

7. Group the following Elements into work stations by using “largest candidate rule”. 14 M  
(The example belongs to small Electrical appliance)

Work element	Element Description	Time (min)	Must precedence By
1	Place frame on work holder	0.2	-
2	Assemble plug to power card	0.4	-
3	Assemble brackets to frame	0.7	1
4	Wire power card to motor	0.1	1, 2
5	Wire power card to switch	0.3	2
6	Assemble mechanism plate to bracket	0.11	3
7	Assemble blade to bracket	0.32	3
8	Assemble motor to bracket	0.6	3, 4
9	Align blade and attach to motor	0.27	6, 7, 8
10	Assemble switch to motor bracket	0.38	5, 8
11	Attach cover, inspect and test	0.5	9, 10
12	Place in tote pan for packing	0.12	11

8. a) Explain various activities of Dispatcher. 7 M

b) State any 7 applications of computer in PPC. 7 M