	P.E.S. COLLEGE OF ENGINEERING **(AN AUTONOMOUS INSTITUTE)** **CHH. SAMBHAJINAGAR-431002** **Regular Winter Examination – 2025** **Course: F.Y.M.Tech. Branch :**Adv.Manu.&Mech. Sys Design**Semester : I** **Subject Code & Name:** MTPESAMSD102T Modelling & Analysis of Manufacturing Systems **Max Marks: 60** **Date:** **Duration: 3 Hr.**		
	MARKING SCHEME		
		(Level/CO)	Marks
Q. 1	**Solve Any one of the following.**		
A)	Enlist various types of Manufacturing System and explain any two of them.	Types of Manufacturing System-06 marks Explanation of explain any two-06 marks	**12**
B)	Explain following models with their uses: (i) Physical Models (ii) Mathematical Models	(i) -06 marks (ii) -06 marks	**12**
Q.2	**Solve Any one of the following.**		
A)	Explain in detail, Random sequence generation Method.	Explaination-12 marks	**12**
B)	Describe Ranked positional weight heuristics in detail.	Explaination-12 marks	**12**
Q. 3	**Solve Any one of the following.**		
A)	Write detailed note on following: (i) Shop Scheduling (ii) Order Release	(i) -06 marks (ii) -06 marks	**12**
B)	Explain dispatching rules and Scheduled generation	Dispatching rules-06 marks Scheduled generation-06 marks	**12**
Q.4	**Solve Any one of the following.**		
A)	Describe the following in detail: (i) Components of warehouse (ii) Design of warehouse	(i) -06 marks (ii) -06 marks	**12**
B)	Explain the following in detail: (i) Storing Complementary items (ii) Pick sequencing	(i) -06 marks (ii) -06 marks	**12**
Q. 5	**Solve Any one of the following.**		
A)	State the different components of Flexible manufacturing system (FMS) and explain any two of them	Different components of FMS-06 marks Explanation of any two methods-06 marks	**12**
B)	Write notes on following: (i) Planning and control hierarchy (ii) Flexible assembly system	(i) -06 marks (ii) -06 marks	**12**