

Reg No.: _____



Jyothi Engineering College(Autonomous)
M.Tech Degree S2 (R) Examination, May 2026 (2025 Scheme)
25PIAT233 - FLEXIBLE MANUFACTURING SYSTEMS



Total Mark: 60

Total Time: 2hr 30min
CO MARK

PART A

Answer All Questions

1. Justify the importance of flexibility in manufacturing systems in the context of product variety and demand uncertainty. CO1 (5)
2. Classify types of Flexible Manufacturing Systems (FMS) and explain their industrial applications. CO2 (5)
3. Discuss processing equipment and Quality Assurance equipment used in flexible manufacturing systems. CO3 (5)
4. Write short notes on cutting tool and tool management. CO4 (5)
5. Compare retrieval and generative Computer Aided Process Planning (CAPP) approaches with key characteristics. CO5 (5)

PART B

Answer Any Five Question(s)

6. Describe the components of FMS and evaluate their operational significance. CO1 (7)
7. Assess economic considerations and functional requirements in FMS equipment selection. CO2 (7)
8. Explain material handling principles and transport systems used in FMS. CO3 (7)
9. Explain working principles and advantages of conveyors and monorail systems. CO3 (7)
10. Examine storage system performance and methods for optimal location planning. CO4 (7)
11. Discuss storage equipment and evaluate their engineering design considerations. CO4 (7)
12. Why are fixture design considerations important in FMS environments? Explain. CO5 (7)
