

PART B — (5 × 13 = 65 marks)

11. (a) Explain the basic elements an automated system. (13)

Or

- (b) What are all the nature and role of the elements of CIM system? (13)

12. (a) Write short notes on the following :

- (i) Retrieval-type CAPP systems, (7)
(ii) Generative CAPP systems. (6)

Or

- (b) What is MRP? Explain the inputs to MRP and various MRP outputs. Also list the various benefits of MRP. (13)

13. (a) (i) Enumerate Role of process planning in CAD/CAM integration. (3)
(ii) Enumerate the role of GT in CAD/CAM integration. (4)
(iii) What are all the advantage and disadvantage of variant type CAPP? (6)

Or

- (b) Explain D CLASS and OPTIZ coding systems with suitable examples. (13)

14. (a) Discuss Automated guided vehicle system in detail. (13)

Or

- (b) Discuss the functions, application, advantage and disadvantage of a FMS. (13)

15. (a) Explain in details Robot Anatomy and its related attributes. (13)

Or

- (b) Explain in details about the types of robot part programming. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Explain Machine Cell design and layout with neat diagram. (15)

Or

- (b) With respect to principles, tools and examples explain Lean manufacturing and Just-in-time production systems. (15)