

22658

23124

3 Hours / 70 Marks

Seat No.

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Instruction : All Questions are *compulsory*.

Marks

1. Attempt any FIVE of the following :

10

- (a) List various elements of CIM.
- (b) State the main purpose of simulation in CAD software.
- (c) Enlist applications of ERP software.
- (d) State different types of network topologies.
- (e) Define FMS.
- (f) State any two industry applications of robot.
- (g) Define Automation.

2. Attempt any THREE of the following :

12

- (a) Draw neat labelled sketch of traditional product cycle.
- (b) Explain with neat sketch any one type of network topology.
- (c) Explain with suitable example any one method of coding in Group technology.
- (d) Classify different sensors used in Robots.

3. Attempt any THREE of the following :

12

- (a) Explain with neat sketch types of Robot joints.
- (b) Compare traditional product cycle with CIM product cycle.
- (c) Describe with neat sketch Ring topology.
- (d) Explain the term specialization of operations with an example.



- 4. Attempt any THREE of the following : 12**
- (a) Distinguish between mechanical and electric actuators.
 - (b) Explain basic configuration of robot with neat sketch.
 - (c) Differentiate between Hard automation and soft automation used in industry.
 - (d) Explain role of PLM in business with suitable example.
- 5. Attempt any THREE of the following : 12**
- (a) Differentiate between high cost and low cost automation.
 - (b) Explain any two strategies in automation with suitable example.
 - (c) Describe the following types of layout :
 - (i) Loop layout
 - (ii) Inline layout
 - (d) Write advantages and benefits of CIM.
- 6. Attempt any TWO of the following : 12**
- (a) Classify different Computer Aided Business Functions (CABF) and mention its purpose.
 - (b) Draw neat labelled sketch of network topologies used in CIM.
 - (c) Classify the FMS based on flexibility for rotary type of layout with an example.
 - (d) Draw neat sketch of wrist yaw and wrist roll of a Robot.
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