22658

12526

3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Illustrate your answer with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

(5) Use of Non-programmable Electronic Pocket Calculator is permissible.

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following: **10**

a) Define product life cycle.

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 group technology. Write two advantages.

f) Write two applications each for fixed automation and programmable automation.

g) State function of manipulator.

P.T.O.

Marks

2. Attempt any THREE of the following: **12**

a) Draw neat labelled sketch of traditional product cycle.

b) How PLC and SCADA is used in computer Aided Manufacturing.

c) Explain the role of Data Base Management System (DBMS) in business organization.

d) Classify different sensors used in Robots.

3. Attempt any THREE of the following: **12**

a) Explain in brief material resource planning.

b) Explain major elements of FMS with neat sketch.

c) Comment on "Use of Automation in industry will affect on employment".

d) Apply the grippers for following material handling :–

Iron, Glass sheet, Aluminium sheet, Mild steel scrap.

4. Attempt any THREE of the following: **12**

a) Describe the Computer Aided Business Functions (CABF) with suitable example.

b) State and explain any two network hardwares used in computer networking.

c) Explain in brief the concept of group technology and cellular manufacturing.

d) Differentiate between hard automation and soft automation used in industry.

5. Attempt any THREE of the following: **12**

a) List application areas of Computer Aided Manufacturing for manufacturing control.

b) Describe role of supply chain management in business with example.

c) Use any one of strategies in automation with suitable example of it.

d) Write advantages and benefits of CIM.

Marks

6. Attempt any TWO of the following: **12**

a) How PLM is beneficial? List softwares used. Write on product visualization.

b) Draw diagram of Bus and Ring Network topology and label the parts.

c) Classify the FMS based flexibility for rotary type of layout with an examples.

d) Describe various functions performed by robots in any four of following applications :–

i) Pelletizing

ii) Machine loading and unloading

iii) Welding

iv) Assembly and Inspection.
