

Unit –V
Industrial Robotics
2 marks

1. What is the significant advantage of using a Robot in a computer integrated manufacturing system?
2. Describe the elements of a robotic system.
3. How do you justify the use of a robot?
4. How do you classify robots?
5. Differentiate between a SCARA and a gantry robot.
6. Define the work envelope of a robot. How does it differ from one type of robot to another?
7. What are the different types of drives used in robots?
8. What are the different types of control systems used in robots?
9. How do you specify a robot?
10. What are the different methods of programming of robots?
11. Discuss the basic types of robot programming languages.
12. How do you integrate CAD data with robot operation?
13. Briefly describe significant application areas of robots.
14. Discuss the importance of proper presentation of work parts to the robots.
15. Determine the effective work envelope of a robot from its specifications.

16 marks

1. What is an end effector? And explain in detail.
2. What are the three types of industrial applications, as identified in the text.
3. What is the robot programming and difference between the powered lead through and manual lead through in robot programming?
4. What are the different types of configurations in robot system?
5. What is the difference between repeatability and accuracy in robotic manipulator?
6. Robotic sensors are classified as internal and external. What is the distinction?