PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY (AUTONOMOUS), KANURU
DEPARTMENT OF MECHANICAL ENGINEERING
III B. TECH II-SEMESTER – COMPUTER SCIENCE and ENGINEERING
ASSIGNMENT TEST - I (2025-26)
SUBJECT - 20ME4702B-INTODUCTION TO INDUSTRIAL ROBOTICS

Duration:1-week *Max. Marks:5*

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Note: Students with odd roll numbers answer odd-numbered questions, while those with even roll numbers answer even-numbered questions

1.	Explain anatomy of robot with neat sketch	1M	L2	CO1
2.	Explain various types of automation and role of robots in each type of automation.	1M	L2	CO1
3.	Describe the present and future applications of robots	1M	L2	CO1
4.	Discuss the factors influencing the selection of the robot for a specific application.	1M	L2	CO1
5.	Give the detailed classification of the robots based on coordinate system and method of control. Explain in detail	1M	L2	CO1
6.	Give the classification of robot actuators and their relative merits and demerits	0.5M	L2	CO2
7.	Explain the working of Stepper motor.	0.5M	L2	CO2
8.	Explain the working of the following position sensors: potentiometers, resolvers, and encoders	1M	L2	CO2
9.	What is end effector? Explain various types of end effectors.	1M	L2	CO2
10.	Explain the Requirements and challenges of end effectors.	1M	L2	CO2
11.	Describe the selection of the end effector for a given application	0.5M	L2	CO3
12.	What is work volume of robot? Explain with two examples.	0.5M	L2	CO3