PVP 20

Code: 20ME2702B

IV B.Tech - I Semester – Regular Examinations - DECEMBER 2023

ROBOTICS

(Common for ALL BRANCHES)

Duration: 3 hours Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level CO – Course Outcome

			BL	CO	Max. Marks
		UNIT-I			
1		What are the major components of Robot? Explain them briefly with neat sketch.	L2	CO1	14 M
		OR			
2	a)	What is work envelope? Draw work envelope for Cartesian coordinate, cylindrical coordinate and spherical coordinate.	L2	CO1	8 M
	b)	How do you select a robot? List various selection criteria's of robots.	L2	CO1	6 M
		UNIT-II			
3		Discuss the types of hydraulic actuators. Explain them with neat sketch.	L2	CO2	14 M

		OR			
4	a)	Compare different types of end effectors based on its applications.	L2	CO2	8 M
	b)	Write short note on any one electrical actuator.	L2	CO2	6 M
		UNIT-III			
5		Explain in detail about various programming languages used in Robotics.	L2	CO3	14 M
		OR			
6		What is lead through robot programming? Compare it with Teach pendent method.	L2	CO3	14 M
		UNIT-IV			
7	a)	Classify the types of sensors used in robots and discuss them in detail.	L1	CO4	7 M
	b)	Explain about any one displacement sensor with neat sketch.	L2	CO4	7 M
		OR			
8		Compare different type of Acoustic sensors based on its applications.	L3	CO4	14 M
		UNIT-V			
9		Explain in detail about the robot real time applications in material handling.	L2	CO4	14 M

	OR			
10	Explain in detail about the applications of robot in processing operations.	L2	CO4	14 M