Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING
MID TERM EXAMINATION - OCT 2023

Semester : Semester III - 2022
Course Code : MEC3065
Course Name : Sem III - MEC3065 - Introduction to Robotics and Automation
Program : B.TECH

Date : 02-NOV-2023
Time : 9:30AM - 11:00AM
Max Marks : 50
Weightage : 25%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE FIVE QUESTIONS **5 X 2=10M**

1. Write down any four selection criteria for a robot.
(CO1) [Knowledge]
2. What are the different uses of sensors in robotics?
(CO1) [Knowledge]
3. What are robots? what are the applications of robots.
(CO2) [Knowledge]
4. Define Accuracy and Repeatability.
(CO2) [Knowledge]
5. Write a short note on work volume.
(CO2) [Knowledge]

PART B

ANSWER ALL THE TWO QUESTIONS **2 X 10 = 20M**

6. What are eddy current proximity sensors? With suitable diagram explain the working of eddy current proximity sensors.
(CO1) [Comprehension]
7. List and explain the different functions of robotic vision system.
(CO2) [Comprehension]

PART C

ANSWER THE FOLLOWING QUESTION **1 X 20 = 20M**

8.a) One of the major factors which determines how an industrial robot will move and what limits its workspace is its robot configuration. List and explain any one type of robot configuration. (CO1)

8.b) A type of sensor which is used to detect metallic objects by non-contacting them. Suggest anyone type sensor for this application and explain with suitable diagram. (CO2)