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School of Engineering

**B.TECH Mechanical Engineering in E-Vehicles and Autonomous Vehicles
Mid Term Examination - May 2024**

**Duration : 90 Minutes
Max Marks : 50**

Sem VI - G3UC602B - Robotics

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Explain different types of sensors commonly used in robotics. K2 (2)
- 2) Define point-to-point control system in robotics. K1 (3)
- 3) Explain the concept of continuous path control in robotic systems. How does it enable smooth and precise motion? K2 (4)
- 4) Interpret the mapping involving mechanism for translated frames and rotated frames. K2 (6)
- 5) Identify the primary functions of manipulators in industrial settings. K3 (6)
- 6) Illustrate the advantages and limitations of point-to-point control in robotic applications. K3 (9)
- 7) Compare the different types of drives used in robotic systems, including their principles of operation and applications. K4 (8)
- 8) Analyze the unimation PUMA 560 robot with neat sketch.. K4 (12)

OR

Analyze about the Homogenous Transform and its Inverse in Robot Transform. K4 (12)