

School of Mechanical Engineering
Mechanical Engineering
ETE - Jun 2023

Time : 3 Hours

Marks : 50

Sem VI - BTME3082 - Robotics and Automation
Your answer should be specific to the question asked
Draw neat labeled diagrams wherever necessary

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| 1. | Mention any 4 components of a robot. | K2 CO2 (2) |
| 2. | What is meant by work envelope? | K2 CO1 (2) |
| 3. | Discuss three types of mechanical gripper mechanism. | K2 CO4 (2) |
| 4. | Explain the different types of electrical servo motors used in robot actuation. | K2 CO4 (2) |
| 5. | Differentiate between joint and link. | K2 CO3 (2) |
| 6. | What are the advantages and dis-advantages of Force and Torque sensor. | K3 CO1 (5) |
| 7. | Write short note on forward and backward iteration? | K3 CO3 (6) |
| 8. | Drive the specification of the Robot. Distinguish between the accuracy and repeatability of a robot | K3 CO2 (5) |
| 9. | What are the different types of motion that a robot manipulator can make in travelling from point to point? Explain. | K4 CO3 (8) |
| 10. | Explain different types of sensors used in industrial robots. Discuss briefly different applications of Industrial robot. | K4 CO2 (8) |
| 11. | Explain the role of robots in loading and unloading? | K4 CO1 (8) |