



QP CODE: 25022484



Reg No : .....

Name : .....

**M.Sc DEGREE (CSS) SPECIAL REAPPEARANCE EXAMINATION, APRIL 2025**

**Third Semester**

M.Sc ELECTRONICS

**ELECTIVE - EL810301 - ROBOTICS**

2019 ADMISSION ONWARDS

B9FDCCAA

Time: 3 Hours

Weightage: 30

**Part A (Short Answer Questions)**

*Answer any **eight** questions.*

*Weight **1** each.*

1. Write a short notes about robotics precision.
2. Write a short notes about robotics accuracy.
3. What is revolute joint?
4. What is the need for using potentiometer as a position sensor?
5. Explain hydraulic and pneumatic actuators.
6. Differentiate between Permanent magnet type and variable reluctance type stepper motor.
7. What is point to point path control?
8. What is meant by teach in method?
9. What are the machine utilization problems in material transfer application?
10. What is die casting?

(8×1=8 weightage)

**Part B (Short Essay/Problems)**

*Answer any **six** questions.*

*Weight **2** each.*

11. Describe the basic structure of a robotic system with neat sketches.
12. What are the different types of joints based on robot?
13. Explain with diagram LVDT.
14. Explain the working of proximity sensors.
15. Explain about high level programming languages.





16. Explain software and speed up in robotics.
17. How continuous arc welding is performed by robots in the industry?
18. Explain selection of robot with an example.

(6×2=12 weightage)

**Part C (Essay Type Questions)**

*Answer any **two** questions.*

*Weight 5 each.*

19. Write the notation scheme for designating robot configuration and illustrate with simple sketches?
20. Explain touch & slip sensors.
21. What are the different teaching and programming methods in robotics?
22. What is machine loading and unloading. Explain die casting .How robots helps the human operators in this application?

(2×5=10 weightage)

