

QP CODE: D4BCA2405	(Pages: 2)	Reg. No :
		Name :
FOURTH SEMESTER FYUGP EXAMINATION, APRIL 2026 Discipline Specific Core (DSC) Courses - Major BCA4CJ208 : AUTOMATION AND ROBOTICS (Credits: 4)		
Time: 2 Hours	Maximum Marks: 70	
Section A		
Answer the following questions. Each carries 3 marks (Ceiling: 24 marks)		
1. Define production system.	BL2	CO1, CO2
2. What is the function of actuators in process control?	BL2	CO4
3. What are the limitations and challenges of industrial robot?	BL2	CO1, CO4, CO5
4. Explain Cloud Computing.	BL1	CO5
5. What is the role of communication and quality control in an automated system?	BL2	CO1
6. What are the characteristics of process industries?	BL2	CO5, CO6
7. Discuss the collaboration between academic and industrial research in india.	BL2	CO5, CO6
8. Draw the comparative summary of joint drive system.	BL1	CO3
9. What is CIM and Intelligent manufacturing system?	BL2	CO3
10. What is a programmable logic controller?	BL2	CO3
Section B		
Answer the following questions. Each carries 6 marks (Ceiling: 36 Marks)		
11. What are the components of Direct Digital Control?Explain.	BL2	CO3
12. Define fixed automation and flexible automation. What are the benefits of flexible automation over fixed automation?	BL2	CO3
13. What are the main components of programmable logic controller?	BL2	CO1, CO2, CO3
(PTO)		

14. Distinguish between Conventional, Flexible and Intelligent Automation.	BL2	CO1
15. Why companies invest in automation and CIM? Explain.	BL3	CO3
16. What are the different levels of automation?	BL2	CO1
17. What is CNC machine control unit? List and explain the components of CNC machine control unit.	BL2	CO4
18. Discuss the role of event driven control in discrete control.	BL2	CO1, CO2
Section C		
Answer any one question. Each carries 10 marks (1 x 10 = 10 Marks)		
19. What is a gripper? Explain the different types of grippers.	BL2	CO6
20. Discuss computer based intelligence and AI application in robotics.	BL3	CO5
CO : Course Outcome		
BL : Bloom's Taxonomy Levels (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)		