

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE Winter Examination – 2022 Course: B. Tech. Branch :Electrical Engineering Semester : V Subject Code & Name: BTEEPE504A Industrial Automation Max Marks: 60 Date: 08/02/2023 Duration: 3 Hr.			
Instructions to the Students: 1. All the questions are compulsory. 2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question. 3. Assume suitable data wherever necessary and mention it clearly.			
		(Level/CO)	Marks
Q. 1	Solve Any Two of the following.		12
A)	Draw and explain the architecture of industrial automation system.	CO1	6
B)	Write short notes on sensors and actuators	CO1	6
C)	Draw and explain neat diagram of measurement system in industrial automation	CO1	6
Q.2	Solve Any Two of the following.		12
A)	Describe architecture of PLC and its application in industrial automation	CO2	6
B)	Write the types of logic gate used in PLC with its ladder diagram and truth table.	CO2	6
C)	Explain the timers and counter used in PLC with its Ladder diagram	CO2	6
Q. 3	Solve Any Two of the following.		12
A)	Explain the block diagram of electrical drives system with its advantages and disadvantages.	CO3	6
B)	Write and explain the induction motor drive braking system	CO3	6
C)	Explain the BLDC motor drive in details	CO3	6
Q.4	Solve Any Two of the following.		12
A)	Define the SCADA, its components and feature	CO4	6
B)	Describe the architecture of the SCADA system	CO4	6
C)	Explain application of SCADA in power system	CO4	6
Q. 5	Solve Any Two of the following.		12
A)	Write the difference between SCADA and DCS	CO5	6
B)	Explain the architecture of the distributed control system	CO5	6
C)	Define the terms for distributed control system a) Multiplexers and remote sensing unit b) Display c) Field bus	CO5	6
*** End ***			