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15MT71

Seventh Semester B.E. Degree Examination, July/August 2021 **Industrial Robotics**

Time: 3 hrs.

Max. Marks: 80

			Note: Answer any FIVE full questions.	
σi				
y blank pages. = 50, will be treated as malpractice.	1	a.	Define Automation. Explain different types of Automation.	(08 Marks)
alpra		b.	Write a short note on different drive systems used in Industrial Robots.	(08 Marks)
us m				
ted a	2	a.	With neat diagrams, explain common configurations of Robot.	(12 M1-)
s. trea	4	b.	Define the following:	(12 Marks)
ages II be			(i) Work volume (ii) Spacial Resolution	
ank p			(iii) Accuracy (iv) Repeatability	(04 Marks)
g bla				
aining 42+8	3	a.	Explain D-H convention in Robot Kinematics.	(08 Marks)
eg, 4		b.	Explain configuration of Robot Controller.	(08 Marks)
the				
s wri	4			
line	4	a. b.	Describe different factors to be considered in Robot gripper selection and design. Differentiate Transducers and Sensors and explain Proximity sensor.	(08 Marks)
cross		υ.	Differentiate Transducers and Sensors and expirain Proximity sensor.	(08 Marks)
l/or				
diago r ano	5	a.	With the help of neat block diagram, explain the steps in Machine Vision System.	(08 Marks)
nato		b.	Describe the capabilities and limitations of lead though programming.	(08 Marks)
lly du eval				
ulsor al to	6	a.	Explain goals of Artificial Intelligences Research.	(08 Marks)
appe		b.	Describe Robot Paradigms in Artificial Intelligence.	(08 Marks)
completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages revealing of identification, appeal to evaluator and /or equations written eg, $42+8=50$, will be				
ficat	7	a.	Explain different Robot Cell layouts.	(08 Marks)
ur ar denti			Explain different factors considered in Robot Cell design.	(08 Marks)
g yo				
letin aling	8	0	Write a short note on Interlooks and Dobet Error detection and December in	D - h - 4 11
reve	0	a.	Write a short note on Interlocks and Robot Error detection and Recovery in control.	(08 Marks)
On c Any		b.	Describe general considerations In Robot material handling systems.	(08 Marks)
Important Note: 1.	0		Evaloin Dohot ongove a satis a	
ant N	9	a. b.	Explain Robot spray coating. Describe the Advantages and Problems in Robot arc welding.	(08 Marks) (08 Marks)
port		0.	Describe the 1st variages and 1 roblems in Robot are weiging.	(00 Marks)
Im				
	10	a.	Explain Assembly system configuration in Industrial Robots.	(08 Marks)
		b.	Describe two assembly system configurations used in Industrial Robot.	(08 Marks)