Librarian Learning Resource Centre Acharya institutes

CBCS SCHEME

IISN	1	7MT661
OBIT	D. D	
	Sixth Semester B.E. Degree Examination, Feb./Mar. 2022	ă ă
	Robotics and Automation	

1 1	Tim	ie: 3	hrs. Max. Ma	rks: 100		
	Note: Answer any FIVE full questions, choosing ONE full question from each module.					
ં			Module-1			
ictic	1	a.		(10 Marks)		
alpra		b.	Explain the various generation of Robots.	(10 Marks)		
s mg						
ed a			OR			
treat	2	a.	Briefly explain different configurations of Robots.	(10 Marks)		
ges.		b.	What are degrees of freedom? With a neat sketch, explain the degrees of freedom	associated		
k pa will			with body and wrist of a polar coordinate robot.	(10 Marks)		
olan 50,			Module-2			
ing = 8+	3	a.	Describe the various types of drive systems for Robots.	(10 Marks)		
nain , 42-	3	b.	With a neat sketch, explain the working of Range sensor and its applications.	(10 Marks)		
e ren n eg						
the ritter			OR			
es oi	4	a.	Describe the working of various types of magnetic sensors.	(10 Marks)		
s lin		b.	What is path planning? Describe the classification of Robots based on path contro	1. (10 Marks)		
edua stos				(10 1/14/183)		
nal c			Module-3			
and	5	a.	What are Grippers? Explain its general classification.	(10 Marks)		
w d ator		b.	Discuss the design consideration of Grippers.	(10 Marks)		
' dra valu			OR			
orily to ev	-		What are End effectors? Explain different types.	(10 Marks)		
oulse	6	a. b.	Explain the concept of force control in Robotics manipulator.	(10 Marks)		
On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Any reyealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.		U,	Explaint the concept of force containing			
			Module-4			
ıswe	7	a.	With a neat block diagram, explain the various elements of an automated system.	(10 Marks)		
ur ai lent		b.	Explain the concept of safety in Industrial Automation.	(10 Marks)		
you of ic			OD			
eting	0		With a neat sketch, explain three levels of safety sensor systems.	(10 Marks)		
mpl	8	a.	Explain the different types of automation systems and their characteristics.	(10 Marks)		
n co ny re		b.	Explain the different types of advonation systems and area services			
. O			Module-5			
e: 1	9	a.	Explain the principles of material handling.	(10 Marks)		
Not		b.	Explain the various storage systems in Industrial Automation.	(10 Marks)		
tant						
Important Note: 1. C			OR	(10 Marks)		
In	10	-	CAK to in III and in a Equipment	(10 Marks)		
		b.	Explain various types of Material Handling Equipments.	,		