Reg. No.												

Question Paper Code	12938

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Seventh Semester

Mechanical Engineering

20MEEL707 - INDUSTRIAL ROBOTICS AND MATERIAL HANDLING SYSTEMS

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks	*K – Level*	*CO*
1.	Name the commonly used industrial robot configurations.	*2*	*K1*	*CO1*
2.	List the various specification of robot.	*2*	*K1*	*CO1*
3.	Define a pixel.	*2*	*K1*	*CO2*
4.	Discuss on digital conversion.	*2*	*K2*	*CO2*
5.	List the various types of gripper.	*2*	*K1*	*CO3*
6.	Define an active gripper.	*2*	*K1*	*CO3*
7.	Define accuracy.	*2*	*K1*	*CO4*
8.	What is the importance of robots in industry?	*2*	*K2*	*CO4*
9.	What is AGV? Where it is Used?	*2*	*K2*	*CO5*
10.	List the factors considered while designing material handling system.	*2*	*K1*	*CO5*

PART - B (5 ×16 = 80 Marks)

Answer **Any FIVE** Questions

		16	*K2*	*CO1*
1.	Draw and Explain about various components of an industrial robot.	*16*	*K2*	*CO1*
2.	How are the images processed and analyzed in a machine vision system? Explain with suitable example.	*16*	*K2*	*CO2*
3.	Discuss about the factors considered while selecting Mechanical Gripper.	*16*	*K2*	*CO3*
4.	Illustrate the pay back and rate of return method of economic analysis while implementing robots in industry suitable example problem.	*16*	*K2*	*CO4*
5.	Explain in detail about Automated Guided Vehicles in material handling system.	*16*	*K2*	*CO5*
6.	Explain the bar code technology.	*16*	*K2*	*CO6*
7.	Explain the role of Robot for inspection operation giving any industrial example.	*16*	*K2*	*CO2*
8.	Explain various types of grippers used in robot system.	*16*	*K2*	*CO3*