SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+'
Grade Approved by AICTE, New Delhi & Affiliated to Anna University,
Chennai

DEPARTMENT OF AEROSPACE ENGINEERING

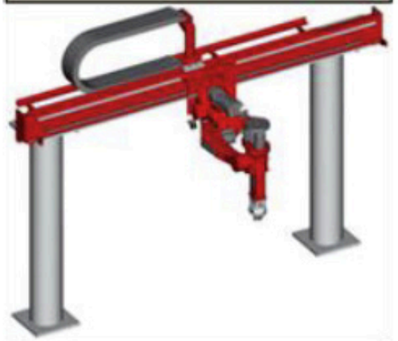
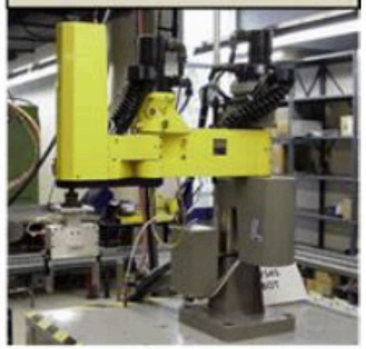
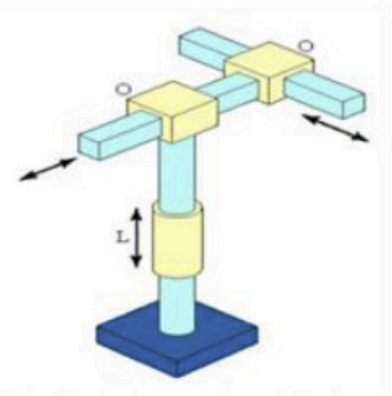
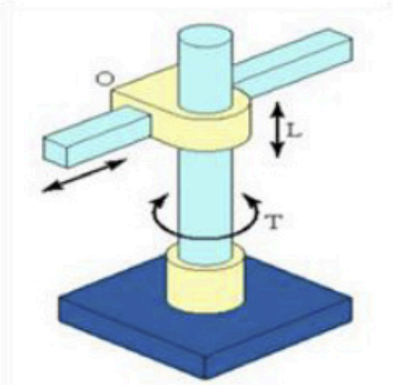
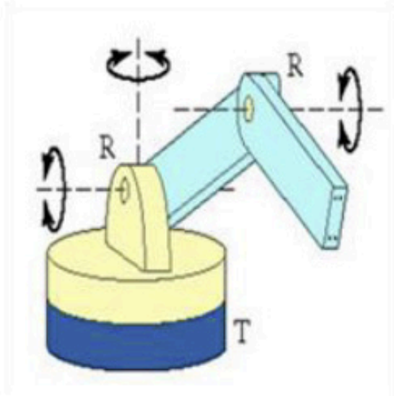
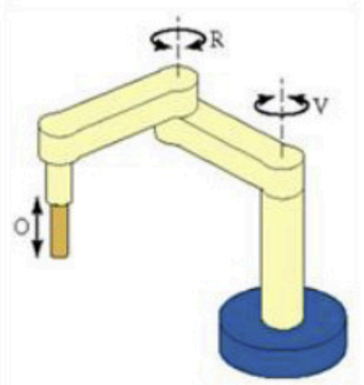
19ASZ301– ROBOTICS & AUTOMATION IN SPACE

III YEAR VI SEM

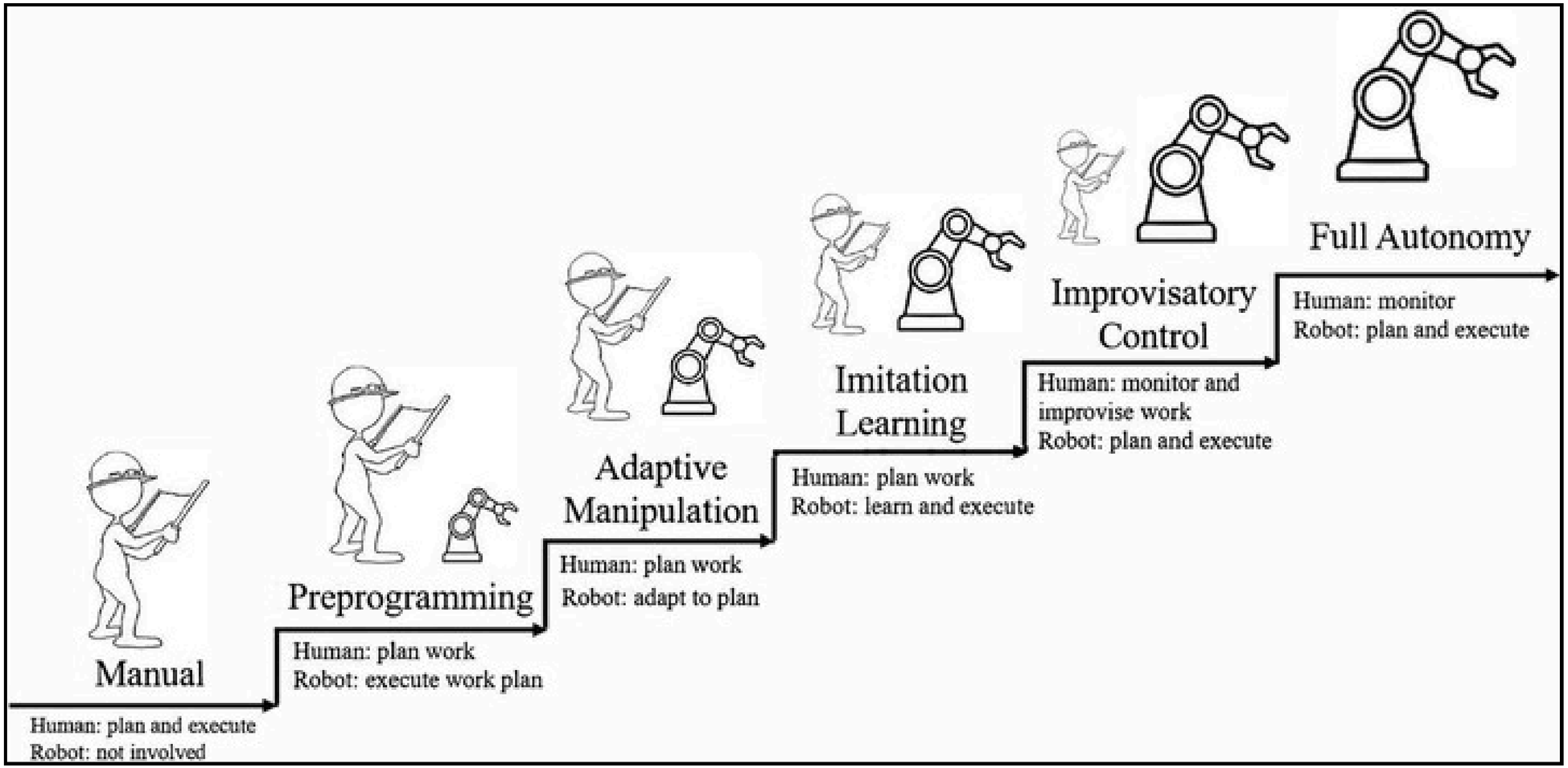
UNIT 2 –INTRODUCTION TO ROBOTICS

TOPIC - Classifications & Applications

CLASSFICATION OF ROBOTS

Orthogonal working area	Silindrical working area	Joint robot Sphere Co-ordinate	SCARA robot
			
			

PROCESS


Manual
Human: plan and execute
Robot: not involved
Preprogramming
Human: plan work
Robot: execute work plan
Adaptive Manipulation
Human: plan work
Robot: adapt to plan
Imitation Learning
Human: plan work
Robot: learn and execute
Improvisatory Control
Human: monitor and improvise work
Robot: plan and execute
Full Autonomy
Human: monitor
Robot: plan and execute

APPLICATIONS

Classification Name	Definition	Function	Types of Robots
Telerobot	Robots that can sense the environment and make limited automatic reactions through computer programs to complete routine tasks	Routine tasks	Picking and placing robots, welding robots, cleaning robots, delivery robots, self-guard gate, ultraviolet-light-disinfection robots
Teleoperator	Robots that deal with nonroutine tasks in hazardous or inaccessible environments with continuous remote control from humans.	Nonroutine tasks	Drones, unmanned spacecraft, undersea robotic vehicles, unscrewed aerial vehicles
Social robot	Robots that have autonomous agents with social intelligence to interact with humans in an acceptable manner.	Entertainment, teaching, comfort, and assistance	Guiding robots, teaching robots, communication robots, assistive healthcare robots, autonomous vehicles


Thank You