Chettinad College of Engineering & Technology
Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

Department of Mechanical Engineering

ME8099- Robotics

Unit V - MCQ Bank

1. Robot is derived from the Czech word

(A) Rabota

(B) Robota

(C) Rebota

(D) Ribota

2. The Robot designed with Cartesian coordinate systems has

(A) Three linear movements

(B) Three rotational movements

(C) Two linear and one rotational movement

(D) Two rotational and one linear movement

3. The Robot designed with Polar coordinate systems has

(A) Three linear movements

(B) Three rotational movements

(C) Two linear and one rotational movement

(D) Two rotational and one linear movement

4. The Robot designed with cylindrical coordinate systems has

(A) Three linear movements

(B) Three rotational movements

(C) Two linear and one rotational movement

(D) Two rotational and one linear movement

5. Drives are also known as_____.

(A) Sensor

(B) Controller

(C) Actuator

(D) Manipulator

6. Which of the following is not functionality of robots?

(A) Reprogamability

(B) Multifunctionality

(C) Efficient performance

(D) Responsibility

7. Clockwise and anti-clockwise rotation about the vertical axis to the perpendicular arm is provided through_____.

(A) Shoulder swivel

(B) Elbow extension

(C) Wrist bend

(D) Arm sweep

8. Radial movement (in & out) to the manipulator Earm is provided by

(A) Elbow extension

(B) Wrist bend

(C) Wrist yaw

(D) Wrist swivel

9. AGV robots can be placed in the category of_____.

(A) Mobile robot

(B) Saturated robot

(C) Unsaturated robot

(D) Natural robot

10. Which of the following is a serial robot?

(A) Commercial robot

(B) Industrial robot

(C) Inhouse robot

(D) None of the given

11. Which part of the robot provides motion to the manipulator and end-effector?

(A) Controller

(B) Sensor

(C) Actuator

(D) Processor

12. Which of the following is not an actuator?

(A) Digital actuator

(B) Hydraulic actuator

(C) Pneumatic actuator

(D) Electric actuator

13. Physical structure of the robot which moves around is called_____.

(A) Links

(B) Joins

(C) Manipulator

(D) End effector

14. The kinematic part of manipulator is called_____.

(A) Links

(B) Joints

(C) End effectors

(D) Sensors

15. SCARA robot is suitable for_____.

(A) Rotary operations

(B) Cylindrical operations

(C) Singal operations

(D) Assembly operations

16. What is the name for information sent from robot sensors to robot controllers?

(A) Temperature

(B) pressure

(C) Feedback

(D) Signal

17. For a robot unit to be considered a functional industrial robot, typically, how many degrees of freedom would the robot have?

(A) 4

(B) 5

(C) 6

(D) 7

18. Which of the following terms refers to the use of compressed gasses to drive (power) the robot device?

(A) Pneumatic

(B) Piezoelectric

(C) Hydraulic

(D) Photosensitive

19. A robot is_____.

(A) Programable

(B) Multipurpose

(C) Both of the given

(D) None of the given

20. The main objective of industrial robot is_____.

(A) Minimize labor requirement

(B) Increase productivity

(C) Enhance life of production machine

(D) All of the given

21. The following is true for a Robot and NC Machine.

(A) Similar power drive technology is used in both

(B) Different feedback systems are used in both

(C) Programming is the same for both

(D) All of the given

22. Match the following

a. Manipulator arm	1. For holding a piece or tool
b. Controllers	2. Move the manipulator arm and end effector
c. Drives	3. Number of degrees of freedom of movement
d. Gripper	4. Delivers commands to the actuators

(A) a-1, b-4, c-2, d-3

(B) a-3, b-4, c-2, d-1

(C) a-3, b-2, c-4, d-1

(D) a-4, b-3, c-2, d-1

23. Industrial Robots are generally designed to carry which of the following coordinate system(s).?

(A) Cartesian-coordinate systems

(B) Polar-coordinate systems

(C) Cylindrical-coordinate system

(D) All of the given

24. Which of the following work is done by a General purpose robot?

(A) Part picking

(B) Welding

(C) Spray painting

(D) All of the given

25. The following drive is used for the lighter class of robots.

(A) Pneumatic drive

(B) Hydraulic drive

(C) Electric drive

(D) All of the given

26. Internal state sensors are used for measuring _____ of the end effector.

(A) Position

(B) Position & Velocity

(C) Velocity & Acceleration

(D) Position, Velocity & Acceleration

27. In which of the following operations Continuous Path System is used?

(A) Pick and Place

(B) Loading and Unloading

(C) Continuous welding

(D) All of the following

28. In which of the following operations point to point Path System is used?

(A) Spray painting

(B) Continues welding

(C) Spot welding

(D) None of the given

29. In a robot the 'Rotary Joints' known as _____.

(A) Revolute

(B) Prismatic

(C) Cylindrical

(D) Spherical

30. In a robot the 'Translotry Joints' known as _____.

(A) Revolute

(B) Prismatic

(C) Cylindrical

(D) Spherical

31. Pneumatic and Hydraulic system which with or without transmission elements provides motion to robot links is called _____.

(A) Motor

(B) Sensor

(C) Actuator

(D) None of the given

32. Which type of sensor is used in a smoke detector?

(A) Motion sensor

(B) Chemical sensor

(C) Temperature sensor

(D) Optical sensor

33. Which of the following is NOT a type of input of an intelligent robot?

(A) Speech
(B) Vision
(C) Hearing
(D) Touch

34. Which of the following terms refers to the left-right movement of a robot arm?

(A) Yaw
(B) Pitch
(C) Swing
(D) Roll

35. Which of the following terms refers to the rotational motion of a robot arm?

(A) Swivel
(B) Axle
(C) Roll
(D) Yaw

36. Which of the following terms is not one of the basic parts of a robot?

(A) Peripheral tools
(B) End effector
(C) Controller
(D) Sensor

37. The number of moveable joints in the base, the arm, and the end effector of the robot determines_____.

(A) Degrees of freedom

(B) Payload capacity

(C) Flexibility

(D) Cost

38. Which of the basic parts of a robot unit would include the computer circuitry that could be programmed to determine what the robot would do?

(A) Sensor

(B) Arm

(C) Drive

(D) Controller

39. With regard to the physics of power systems used to operate robots, which statement or statements is most correct?

(A) Hydraulics involves the compression of liquids

(B) Hydraulics involves the compression of air

(C) Pneumatics involve the compression of air

(D) Chemical batteries produce AC power

40. The walkthrough programming method involves_____.

(A) Walking through your suggested procedure with your supervisor prior to programming

(B) Physically moving the robot through all the motions it is to repeat

(C) Moving the robot from one location to another

(D) None of the given

41. The end effector of Robot cam be:

(A) Robot hand

(B) Gripping device

(C) Actual tool

(D) All of the given

42. Devices that transforms electrical signals into physical movements

(A) Sensors

(B) Actuators

(C) Switches

(D) Switches

43. Type of sensor used to detect both metallic and non-metallic objects:

(A) Capacitive sensor

(B) Inductive sensor

(C) Thermocouple sensor

(D) pH Sensor

44. Sensors used to detect metallic parts only:

(A) Capacitive sensor

(B) Inductive sensors

(C) Thermocouple sensor

(D) Photoelectric sensor

45. A sensor is a device that converts:

(A) Physical quantity into measurable signals

(B) Physical quantity into mechanical signal

(C) Electrical signal into physical quantity

(D) Physical quantity into electric signal only

46. Work volume of the cartesian coordinate robot is_____.

(A) Box-shaped area

(B) Cylindrical area

(C) Spherical area

(D) Triangular area

47. Work volume of a cylindrical coordinate robot is_____.

(A) Box-shaped area

(B) Cylindrical area

(C) Two concentric cylinders

(D) Hemi spherical area

48. Work volume of a spherical coordinate robot is_____.

(A) Two concentric hemispheres

(B) Two concentric spheres

(C) Two concentric cylinders

(D) Quasi - Spherical space

49. Work volume of a jointed arm configuration robot is_____.

(A) Two concentric cylinders

(B) Two concentric hemispheres

(C) Two concentric spheres

(D) Quasi - Spherical space

50. _____ is the brain of the robot.

(A) Sensor

(B) Controller

(C) Processor

(D) Actuator

51. Spot welding robot works on_____.

(A) Point to point path system

(B) Contouring path system