

2. A Robot is a

- a. Programmable
- b. Multi functional manipulator
- c. Both a and b
- d. None of the above

Answer: C

3. The main objective(s) of Industrial robot is to

- a. To minimise the labour requirement
- b. To increase productivity
- c. To enhance the life of production machines
- d. All of the above

Answer: D

4. 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 same for both
- d. All of the above

Answer: A

5. Match the following

Robot part**Function**

- | | |
|--------------------|--|
| 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

Answer: D

6. Drives are also known as

- a. Actuators
- b. Controller
- c. Sensors
- d. Manipulator

Answer: A

7. Clockwise or Anti clockwise rotation about the vertical axis to the perpendicular arm is provided through

- a. Shoulder swivel

- b. Elbow extension
- c. Arm sweep
- d. Wrist bend

Answer: C

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

- a. Elbow extension
- b. Wrist bend
- c. Wrist swivel
- d. Wrist yaw

Answer: A

9. 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 above

Answer: D

10. 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

Answer: A

11. 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

Answer: D

12. 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

Answer: C

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

- a. Part picking

- b. Welding
- c. Spray painting
- d. All of the above

Answer: D

14. The following drive is used for lighter class of Robot.

- a. Pneumatic drive
- b. Hydraulic drive
- c. Electric drive
- d. All of the above

Answer: A

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

- a. Position
- b. Position & Velocity
- c. Velocity & Acceleration
- d. Position, Velocity & Acceleration

Answer: D

16. Which of the following sensors determines the relationship of the robot and its environment and the objects handled by it

- a. Internal State sensors
- b. External State sensors
- c. Both a and b
- d. None of the above

Answer: C

17. Which of the following is not a programming language for computer controlled robot?

- a. AMU
- b. VAL
- c. RAIL
- d. HELP

Answer: A

18. 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 above

Answer: C

19. Which of the following branch process with sensory feedback in robotics?

- a. Computer Engineering
- b. Mechanical Engineering
- c. Electrical Engineering
- d. Electronics Engineering

Answer: A

20. What is EKF

- a. Existence Kalman filter
- b. Extended Kalman Filter
- c. Each Kalman filter
- d. Evaluation Kalman Filter

Answer: B

21. Weighted voting of correction vectors is a technique of

- a. Recursive filtering
- b. Filtering
- c. Landmark
- d. Pose estimation

Answer: A

22. Which of the following sensor work based on radio detection and ranging?

- a. Sonar
- b. Radar
- c. Intertial
- d. Biosensor

Answer: B

23. What is the name of algorithm in which a loop that continually moves in the direction of increasing value – that is uphill

- a. Up-Hill Search
- b. Hill-Climbing
- c. Hill algorithm
- d. Platue climbing valley

Answer: B

24. Which of the following is the component of machine that is responsible for controlling a mechanism system?

- a. Sensor
- b. Middleware
- c. Actuator
- d. Transducer

Answer: C

25. A computer software that provide the services to software applications beyond those available from the operating system is called

- a. Sensor
- b. Middleware
- c. Actuator
- d. Transducer

Answer: B

26. What is reckoning

- a. Evaluating existing location
- b. Evaluating Previous location
- c. Information acquired
- d. Finding the location

Answer: A

27. The original LISP machines produced by both LMI and Symbolics were based on research performed at

- a. CMU
- b. MIT
- c. Stanford University
- d. RAMD

Answer: B

28. What are the main cons of hill-climbing search?

- a. Terminates at local optimum & Does not find optimum solution
- b. Terminates at global optimum & Does not find optimum solution

- c. Does not find optimum solution & Fail to find a solution
- d. Fail to find a solution

Answer: A

29. The Signals which represent 2D & 3D objects gathered from sensor data are referred as

- a. Relational maps
- b. Sensorial maps
- c. Perceptul maps
- d. Geomatic Maps

Answer: D

30. Convergence of the estimates is a technique of

- a. Recursive filtering
- b. Filtering
- c. Landmark
- d. Pose estimation

Answer: A

31. Which of the following sensor is not used to measure the distance?

- a. Radar
- b. Sonar
- c. Laser Rangefinder
- d. Intertial Sensor