

Total number of questions : 60

11363\_Artificial Intelligence and Robotics

Time : 1hr

Max Marks : 50

N.B

- 1) All questions are Multiple Choice Questions having single correct option.
  - 2) Attempt any 50 questions out of 60.
  - 3) Use of calculator is allowed.
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- 

**Q.no 1. Classification of data points is a technique of**

- A : Recursive filtering
- B : Filtering
- C : Laandmark
- D : Pose estimation

**Q.no 2. What is the evaluation function in greedy approach?**

- A : Heuristic function
- B : Path cost from start node to current node
- C : Path cost from start node to current node + Heuristic cost
- D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 3. Which of the following branch is not a parts of robotics?**

- A : Computer Engineering
- B : Mechanical Engineering
- C : Electrical Engineering
- D : Chemical Engineering

**Q.no 4. The sensor that sends out sound pulses called pings, then receives the returning sound echo is called**

- A : Active Sonar
- B : Passive Sonar
- C : Radar
- D : Laser Rangefinder

**Q.no 5. what is HDOP**

- A : Horizontal geometric dilution of position
- B : Horizontal geometric dilution of precision
- C : Vertical geometric dilution of precision
- D : Vertical geometric dilution of position

**Q.no 6. Which of the following is an example of infrared sensor?**

- A : Thermometer
- B : Accelerometer
- C : Gyroscope
- D : TV Remote

**Q.no 7. Which of the following sensor work based on sound navigation ranging?**

- A : Sonar
- B : Radar
- C : Intertial
- D : Biosensor

**Q.no 8. The robot that repeats the same motions according to recorded information is called**

- A : Fixed Sequence Robot
- B : Variable sequence robot
- C : Playback Robot
- D : Numerical Control robot

**Q.no 9. Adaptive localization at multiple scales is a technique of**

- A : Recursive filtering
- B : Filtering
- C : Laandmark
- D : Pose estimation

**Q.no 10. Which of the following is not functionality of robotics?**

- A : Re-programmability
- B : Multi-functionality
- C : Efficient performance
- D : Responsibility

**Q.no 11. Which sensor is used in today's mobile phone screen?**

- A : Contact Sensor
- B : Inertial Sensor
- C : Infrared Sensor
- D : Biosensor

**Q.no 12. What is Global Hawk**

- A : Atonomous aircraft
- B : Aircraft
- C : Airopplan
- D : Robot

**Q.no 13. Natural or artificial can be category of**

A : Localization

B : Landmarks classes

C : Pose evaluation

D : Robot

**Q.no 14. What is AGV**

A : Automated guided Vehical

B : Automated grid Vehical

C : Automated grid Van

D : Automatic guided Vehical

**Q.no 15. A device that is used to detect event or changes in the environment is called**

A : Sensor

B : Middleware

C : Actuator

D : Transducer

**Q.no 16. SONAR is example of**

A : Video sensing

B : GPS

C : Robot

D : Machine

**Q.no 17. Which is type of Robotics Perception**

A : Map related

B : Path related

C : Position related

D : Edge related

**Q.no 18. Which of the following is not true?**

A : For robotics, you should have a knowledge of different sensors

B : For robotics, you must be able to write different planning algorithms

C : For robotics, you may have to use actuators

D : For robotics, you do not require help of computer engineers, mechanical engineers and electrical engineers

**Q.no 19. Which of the following is not advantage of robotics?**

A : Greater flexibility and re-programmability

B : Greater response time to inputs than human

C : Greater unemployment

D : Improved product quality

**Q.no 20. Which of the following branch process with sensory feedback in robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Electronics Engineering

**Q.no 21. Best-First search can be implemented using the following data structure**

A : Queue

B : Stack

C : Priority Queue

D : Circular Queue

**Q.no 22. What is EKF**

A : Existence Kalman filter

B : Extended Kalman Filter

C : Each Kalman filter

D : Evalution Kalman Filter

**Q.no 23. Weighted voting of correction vectors is a technique of**

A : Recursive filtering

B : Filtering

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D : Pose estimation

**Q.no 24. Which of the following sensor work based on radio detection and ranging?**

A : Sonar

B : Radar

C : Intertial

D : Biosensor

**Q.no 25. 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

**Q.no 26. 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

**Q.no 27. 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

**Q.no 28. What is reckoning**

A : Evaluating existing location

B : Evaluating Previous location

C : Information acquired

D : Finding the location

**Q.no 29. 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

**Q.no 30. Robot that perform the successive stages of a task according to predetermined, unchanging method is called as**

A : Fixed Sequence Robot

B : Variable sequence robot

C : Playback Robot

D : Numerical Control robot

**Q.no 31. 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

**Q.no 32. The Signals which represent 2D & 3D odjects gathered from sensor data are referred as**

A : Relational maps

B : Sensorial maps

C : Perceptul maps

D : Geomatic Maps

**Q.no 33. Convergenese of the estimates is a technique of**

A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 34. Which of the following sensor is not used to measure the distance?**

A : Radar

B : Sonar

C : Laser Rangefinder

D : Intertial Sensor

**Q.no 35. Triagulation is a technique associate with**

A : Pose

B : Landmarks classes

C : Robot

D : Odometry

**Q.no 36. Which of the following is NOT one of the advantages associated with a robotics implementation program?**

A : Low costs for hardware and software

B : Robots work continuously around the clock

C : Quality of manufactured goods can be improved

D : Reduced company cost for worker fringe benefits

**Q.no 37. Sensor based servoing associate with**



A : Robot pose

B : Robot action

C : Robot position

D : Robot path

**Q.no 38. Why do the robot need sensor?**

A : To collect information from environment

B : To map environment attribute to a quantitative measurement

C : only option 1 is true

D : Both option 1 and 2 are true

**Q.no 39. The device that is used to convert energy from one form to another is called**

A : Emitter

B : Transducer

C : Transmitter

D : Receiver

**Q.no 40. Which of the following is true?**

A : Robot minimize the labor cost

B : Robot minimize the productivity

C : Robot minimize the life of production machine

D : Robot minimize the quality of work

**Q.no 41. Which is mode of mining**

A : Close pit mining

B : Mining

C : Pit Mining

D : Underground Mining

**Q.no 42. Which is type of Robotics Perception**

A : Marker related

B : Map related

C : Path related

D : Position related

**Q.no 43. Which is fundamental approach of mapping**

A : Mapping without localization

B : Sensorial maps

C : Perceptual maps

D : Geometric Maps

**Q.no 44. Which localization does not require any previous information**

A : Absolute

B : Local

C : Global

D : Passive

**Q.no 45. What is necessity for a lot of sensible mobile robotics function**

A : Map discovery

B : Geometric Maps

C : Perceptual maps

D : Sensorial maps

**Q.no 46. If something is open or closed in the system then it is informed by following sensor.**

A : Contact Sensor

B : Inertial Sensor

C : Sonar Sensor

D : Biosensor

**Q.no 47. With regard to the physics of power systems used operate robots, which statement or statements are most correct?**

A : hydraulics involves the compression of liquids

B : hydraulics involves the compression of air

C : pneumatic involves the compression of air

D : chemical batteries produce AC power

**Q.no 48. Which of the following is an example of inertia sensor?**

A : Thermometer

B : Accelerometer

C : Touch screen

D : TV Remote

**Q.no 49. Which of the following is an example of contact sensor?**

A : Thermometer

B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 50. Which of the following sensor is used to monitor the motor activities?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 51. Industrial Robots are generally to designed to carry which of the following coordinate system(s).**

A : Cartesian coordinate systems

B : Polar systems.

C : Cylindrical systems

D : Spherical Sytem

**Q.no 52. For a robot unit to be considered a functional industrial robot, typically, how many degrees of freedom would the robot have?**

A : Three

B : Four

C : Six

D : Eight

**Q.no 53. Radial movement (in & out) to the manipulator arm is provided by**

A : Elbow extension

B : Wrist bend

C : Wrist swivel

D : Wrist yaw

**Q.no 54. Which of the following robotic control paradigm make use of planning?**

A : Horizontal and Vertical

B : Vertical and Hybrid

C : Horizontal and Hybrid

D : Horizontal, Vertical and Hybrid

**Q.no 55. Which of the following is the serial robot?**

A : Commercial robot

B : Industrial robot

C : In-house robot

D : Mobile Robot

**Q.no 56. A clearly different group of maps showing particular application to robots is called as**

A : Relational maps

B : Sensorial maps

C : Perceptul maps

D : Geomatic Maps

**Q.no 57. The Robot designed with Cylindrical coordinate system has**

A : A Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

D : Two rotational & one liner movement

**Q.no 58. The Robot designed with Polar coordinate system has**

A : Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

D : Two rotational & one liner movement

**Q.no 59. Which of the following work is done by General purpose Robot?**

A : Part drive

B : Welding

C : Spray picking

D : Part panting

**Q.no 60. The number of moveable joints in the base, the arm, and the end effectors of the robot determines**

A : degrees of freedom

B : payload capacity

C : operational limits

D : flexibility

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**Answer for Question No 1. is a**

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**Answer for Question No 2. is a**

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**Answer for Question No 3. is d**

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**Answer for Question No 4. is a**

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**Answer for Question No 5. is b**

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**Answer for Question No 6. is d**

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**Answer for Question No 7. is a**

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**Answer for Question No 8. is c**

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**Answer for Question No 9. is a**

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**Answer for Question No 10. is d**

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**Answer for Question No 11. is a**

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**Answer for Question No 12. is a**

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**Answer for Question No 13. is b**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is a**

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**Answer for Question No 16. is b**

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**Answer for Question No 17. is d**

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**Answer for Question No 18. is d**

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**Answer for Question No 19. is c**

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**Answer for Question No 20. is a**

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**Answer for Question No 21. is c**

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**Answer for Question No 22. is b**

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**Answer for Question No 23. is a**

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**Answer for Question No 24. is b**

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**Answer for Question No 25. is b**

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**Answer for Question No 26. is c**

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**Answer for Question No 27. is b**

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**Answer for Question No 28. is a**

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**Answer for Question No 29. is b**

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**Answer for Question No 30. is a**

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**Answer for Question No 31. is a**

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**Answer for Question No 32. is d**

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**Answer for Question No 33. is a**

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**Answer for Question No 34. is d**

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**Answer for Question No 35. is a**

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**Answer for Question No 36. is a**

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**Answer for Question No 37. is a**

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**Answer for Question No 38. is d**

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**Answer for Question No 39. is b**

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**Answer for Question No 40. is a**

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**Answer for Question No 41. is d**

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**Answer for Question No 42. is a**

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**Answer for Question No 43. is a**

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**Answer for Question No 44. is c**

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**Answer for Question No 45. is a**

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**Answer for Question No 46. is a**

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**Answer for Question No 47. is c**

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**Answer for Question No 48. is b**

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**Answer for Question No 49. is a**

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**Answer for Question No 50. is b**

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**Answer for Question No 51. is a**

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**Answer for Question No 52. is c**

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**Answer for Question No 53. is a**

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**Answer for Question No 54. is c**

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**Answer for Question No 55. is b**

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**Answer for Question No 56. is c**

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**Answer for Question No 57. is c**

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**Answer for Question No 58. is d**

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**Answer for Question No 59. is b**

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**Answer for Question No 60. is a**

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**Q.no 1. Which of the following sensor work based on sound navigation ranging?**

- A : Sonar
- B : Radar
- C : Intertial
- D : Biosensor

**Q.no 2. The sensor that requires physical touch of an object is called**

- A : Contact Sensor
- B : Inertial Sensors
- C : Infrared Sensor
- D : Laser Rangefinder

**Q.no 3. Which of the following sensor make use of light emitting diode?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 4. What is GPS**

A : Global Positioning system

B : Global Point System

C : Global System

D : Global path System

**Q.no 5. Robots Localization indicates the robots**

A : Performance

B : Capability

C : Direction

D : Measurements

**Q.no 6. What is AGV**

A : Automated guided Vehical

B : Automated grid Vehical

C : Automated grid Van

D : Automatic guided Vehical

**Q.no 7. Best-First search can be implemented using the following data structure**

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**Q.no 8. The robot that repeats the same motions according to recorded information is called**

- A : Fixed Sequence Robot
- B : Variable sequence robot
- C : Playback Robot
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**Q.no 9. Which of the following sensor is most suitable for clinical, agricultural and food industry?**

- A : Contact Sensor
- B : Inertial Sensor
- C : Infrared Sensor
- D : Biosensor

**Q.no 10. what is HDOP**

- A : Horizontal geometric dilution of position
- B : Horizontal geometric dilution of precision
- C : Vertical geometric dilution of precision
- D : Vertical geometric dilution of position

**Q.no 11. What is EKF**

- A : Existence Kalman filter
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**Q.no 13. The sensor that sends out sound pulses called pings, then receives the returning sound echo is called**

- A : Active Sonar
- B : Passive Sonar
- C : Radar
- D : Laser Rangefinder

**Q.no 14. Which of the following search strategy uses a problem specific knowledge**

- A : uninformed Search
- B : Breadth-First-Search
- C : Heuristic Search
- D : Best search

**Q.no 15. Weighted voting of correction vectors is a technique of**

- A : Recursive filtering
- B : Filtering
- C : Laandmark
- D : Pose estimation

**Q.no 16. Best-First search is a type of informed search, which of the following principle used to choose the best next node for expansion**

- A : Evaluation function returning lowest evaluation
- B : Evaluation function returning highest evaluation
- C : Evaluation function returning lowest & highest evaluation
- D : no evaluation function

**Q.no 17. Adaptive localization at multiple scales is a technique of**

- A : Recursive filtering
- B : Filtering
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**Q.no 18. Which of the following sensor work based on radio detection and ranging?**

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**Q.no 19. Which sensor is used in today's mobile phone screen?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 20. Which of the following is a visual sensor?**

A : Laser Rangefinder

B : Radar

C : Smart Camera

D : Sonar

**Q.no 21. Who work on space Robotics mission**

A : Soviet

B : IBM

C : Google

D : Yahoo

**Q.no 22. Which of the following is not advantage of robotics?**

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**Q.no 24. Which is type of Robotics Perception**

A : Map related

B : Path related

C : Position related

D : Edge related

**Q.no 25. What is Global Hawk**

A : Autonomous aircraft

B : Aircraft

C : Airoplan

D : Robot

**Q.no 26. Image based servoing associate with**

A : Robot pose

B : Robot action

C : Robot position

D : Robot path

**Q.no 27. what is heuristic function**

A : Lowest path cost

B : Cheapest path from root to goal node

C : Average path cost

D : Estimated cost of cheapest path from root to goal node

**Q.no 28. If a robot can alter its own trajectory in response to external conditions it is considered to be**

A : Intelligent

B : Mobile

C : Open loop

D : Non-servo

**Q.no 29. In a rule-based system procedural domain knowledge is in the form of**

A : Production rules

B : Rule interpreters

C : Meta-rules

D : control rules

**Q.no 30. Who work on space Robotics mission**

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B : IBM

C : Google

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A : Path

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**Q.no 34. Algorihtm used for path planning is**

A : Dijkstra's Algorithm

B : DFS Algorithm

C : BFS Algorithm

D : Searching Algorithm

**Q.no 35. The Signals which represent 2D & 3D odjects gathered from sensor data are referred as**

A : Relational maps

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**Q.no 36. To measure heat of an object which of the following sensor is used?**

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A : hydraulics involves the compression of liquids

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B : Evaluating Previous location

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D : Finding the location

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A : Pose

B : Landmarks classes

C : Robot

D : Odometry

**Q.no 42. What are the main cons of hill-climbing search?**

A : Terminates at local optimum & Does not find optimum solution

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A : Low costs for hardware and software

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- B : Geomatic Maps
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- A : Marker related
- B : Map related
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- D : Position related

**Q.no 50. The sensor that receive sound echoes without transmitting their own sound signals is called**

- A : Active Sonar
- B : Passive Sonar
- C : Radar
- D : Laser Rangefinder

**Q.no 51. The following is true for a Robot & 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 : Programming is not same for both

**Q.no 52. Which of the following is the serial robot?**

A : Commercial robot

B : Industrial robot

C : In-house robot

D : Mobile Robot

**Q.no 53. Radial movement (in & out) to the manipulator arm is provided by**

A : Elbow extension

B : Wrist bend

C : Wrist swivel

D : Wrist yaw

**Q.no 54. The Vertical decomposition of the robotic control system is based on**

A : Sensing

B : Sensing and Planning

C : Sensing and Acting

D : Sensing, Planning and Acting

**Q.no 55. A clearly different group of maps showing particular application to robots is called as**

A : Relational maps

B : Sensorial maps

C : Perceptul maps

D : Geomatic Maps

**Q.no 56. Robot is derived from Czech word**

A : Rabota

B : Robota

C : Rebota

D : Ribota

**Q.no 57. Artificial landmarks positioned exclusively for the functions of**

A : Robot localization

B : Global localization

C : Path finding

D : Approximation location

**Q.no 58. The Robot designed with Cylindrical coordinate system has**

A : A Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

D : Two rotational & one liner movement

**Q.no 59. Drives are also known as**

A : Actuators

B : Controller

C : Sensors

D : Manipulator

**Q.no 60. Drives are also known as**

A : Sensor

B : Controller

C : Actuators

D : Manipulator

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**Answer for Question No 1. is a**

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**Answer for Question No 2. is a**

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**Answer for Question No 3. is c**

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**Answer for Question No 4. is a**

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**Answer for Question No 5. is b**

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**Answer for Question No 6. is a**

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**Answer for Question No 7. is c**

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**Answer for Question No 8. is c**

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**Answer for Question No 9. is d**

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**Answer for Question No 10. is b**

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**Answer for Question No 11. is b**

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**Answer for Question No 12. is d**

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**Answer for Question No 13. is a**

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**Answer for Question No 14. is c**

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**Answer for Question No 15. is a**

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**Answer for Question No 16. is a**

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**Answer for Question No 17. is a**

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**Answer for Question No 18. is b**

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**Answer for Question No 19. is a**

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**Answer for Question No 20. is c**

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**Answer for Question No 21. is a**

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**Answer for Question No 22. is c**

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**Answer for Question No 23. is b**

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**Answer for Question No 24. is d**

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**Answer for Question No 25. is a**

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**Answer for Question No 26. is a**

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**Answer for Question No 27. is d**

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**Answer for Question No 28. is a**

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**Answer for Question No 29. is a**

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**Answer for Question No 30. is a**

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**Answer for Question No 33. is c**

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**Answer for Question No 35. is d**

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**Answer for Question No 38. is d**

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**Answer for Question No 39. is b**

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**Answer for Question No 40. is a**

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**Answer for Question No 41. is a**

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**Answer for Question No 42. is a**

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**Answer for Question No 43. is a**

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**Answer for Question No 44. is a**

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**Answer for Question No 45. is d**

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**Answer for Question No 46. is b**

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**Answer for Question No 47. is a**

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**Answer for Question No 48. is a**

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**Answer for Question No 49. is a**

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**Answer for Question No 50. is b**

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**Answer for Question No 51. is a**

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**Answer for Question No 52. is b**

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**Answer for Question No 53. is a**

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**Answer for Question No 54. is b**

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**Answer for Question No 55. is c**

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**Answer for Question No 56. is b**

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**Answer for Question No 57. is a**

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**Answer for Question No 58. is c**

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**Answer for Question No 59. is a**

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**Answer for Question No 60. is c**

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Total number of questions : 60

11363\_Artificial Intelligence and Robotics

Time : 1hr

Max Marks : 50

N.B

- 1) All questions are Multiple Choice Questions having single correct option.
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**Q.no 1. Which of the following sensor make use of light emitting diode?**

- A : Sonar
- B : Radar
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- D : Laser Rangefinder

**Q.no 2. Which sensor is used in today's mobile phone screen?**

- A : Contact Sensor
- B : Inertial Sensor
- C : Infrared Sensor
- D : Biosensor

**Q.no 3. Which of the following is not true?**

A : For robotics, you should have a knowledge of different sensors

B : For robotics, you must be able to write different planning algorithms

C : For robotics, you may have to use actuators

D : For robotics, you do not require help of computer engineers, mechanical engineers and electrical engineers

**Q.no 4. What is EKF**

A : Existence Kalman filter

B : Extended Kalman Filter

C : Each Kalman filter

D : Evaluation Kalman Filter

**Q.no 5. Classification of data points is a technique of**

A : Recursive filtering

B : Filtering

C : Landmark

D : Pose estimation

**Q.no 6. Which of the following sensor work based on sound navigation ranging?**

A : Sonar

B : Radar

C : Inertial

D : Biosensor

**Q.no 7. Which of the following sensor work based on radio detection and ranging?**

A : Sonar

B : Radar

C : Inertial

D : Biosensor

**Q.no 8. SONAR is example of**

A : Video sensing

B : GPS

C : Robot

D : Machine

**Q.no 9. A\* algorithm is based on which of the following concept?**

A : Best-First-Search

B : Breadth-First-Search

C : Depth-First –Search

D : Hill climbing

**Q.no 10. Which of the following is a visual sensor?**

A : Laser Rangefinder

B : Radar

C : Smart Camera

D : Sonar

**Q.no 11. Which is level of performance**

A : Driving system

B : Convoy system

C : Convoy assistant

D : Automatic guided Vehical

**Q.no 12. 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

**Q.no 13. what is GDOP**

- A : Geometric dilution of position
- B : Geometric dilution of precision
- C : Geometric dilution of path
- D : Geometric dilution of pointer

**Q.no 14. What is AGV**

- A : Automated guided Vehical
- B : Automated grid Vehical
- C : Automated grid Van
- D : Automatic guided Vehical

**Q.no 15. Best-First search can be implemented using the following data structure**

- A : Queue
- B : Stack
- C : Priority Queue
- D : Circular Queue

**Q.no 16. Robots Localization indicates the robots**

- A : Performance
- B : Capability
- C : Direction
- D : Measurements

**Q.no 17. Who work on space Robotics mission**

- A : Soviet
- B : IBM
- C : Google
- D : Yahoo

**Q.no 18. Adaptive localization at multiple scales is a technique of**

A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 19. Which of the following branch is not a parts of robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Chemical Engineering

**Q.no 20. Which of the following is an example of infrared sensor?**

A : Thermometer

B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 21. Weighted voting of correction vectors is a technique of**

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B : Filtering

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**Q.no 22. Which of the following branch process with sensory feedback in robotics?**

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C : Electrical Engineering

D : Electronics Engineering

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A : uninformed Search

B : Breadth-First-Search

C : Heuristic Search

D : Best search

**Q.no 24. What is Global Hawk**

A : Atonomous aircraft

B : Aircraft

C : Airopplan

D : Robot

**Q.no 25. Local localization follows the location of a robots from**

A : Initial Point

B : Final Point

C : Middle point

D : End point

**Q.no 26. Which of the following is an example of contact sensor?**

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B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 27. Robot that perform the successive stages of a task according to predetermined, unchanging method is called as**

A : Fixed Sequence Robot

B : Variable sequence robot

C : Playback Robot



D : Numerical Control robot

**Q.no 28. What is necessity for a lot of sensible mobile robotics function**

A : Map discovery

B : Geometric Maps

C : Perceptual maps

D : Sensorial maps

**Q.no 29. Servoing is generally used to enable**

A : Path

B : Position

C : Robot

D : Direction

**Q.no 30. Convergence of the estimates is a technique of**

A : Recursive filtering

B : Filtering

C : Landmark

D : Pose estimation

**Q.no 31. Which is mode of mining**

A : Close pit mining

B : Mining

C : Pit Mining

D : Underground Mining

**Q.no 32. Which is type of Robotics Perception**

A : Marker related

B : Map related

C : Path related

D : Position related

**Q.no 33. Which is fundamental approach of mapping**

A : Mapping without localization

B : Sensorial maps

C : Perceptual maps

D : Geometric Maps

**Q.no 34. what is heuristic function**

A : Lowest path cost

B : Cheapest path from root to goal node

C : Average path cost

D : Estimated cost of cheapest path from root to goal node

**Q.no 35. Triangulation is a technique associated with**

A : Pose

B : Landmarks classes

C : Robot

D : Odometry

**Q.no 36. The original LISP machines produced by both LMI and Symbolics were based on research performed at**

A : CMU

B : MIT

C : Stanford University

D : RAND

**Q.no 37. Sensor based servoing associated with**

A : Robot pose

B : Robot action

C : Robot position

D : Robot path

**Q.no 38. Which of the following is an example of inertia sensor?**

A : Thermometer

B : Accelerometer

C : Touch screen

D : TV Remote

**Q.no 39. Which of the following is NOT one of the advantages associated with a robotics implementation program?**

A : Low costs for hardware and software

B : Robots work continuously around the clock

C : Quality of manufactured goods can be improved

D : Reduced company cost for worker fringe benefits

**Q.no 40. With regard to the physics of power systems used operate robots, which statement or statements are most correct?**

A : hydraulics involves the compression of liquids

B : hydraulics involves the compression of air

C : pneumatic involves the compression of air

D : chemical batteries produce AC power

**Q.no 41. Active or inactive can be category of**

A : Localization

B : Landmarks classes

C : pose evaluation

D : Robot

**Q.no 42. The device that is used to convert energy from one form to another is called**

A : Emitter

B : Transducer

C : Transmitter

D : Receiver

**Q.no 43. Which of the following statements concerning the implementation of robotic systems is correct?**

A : implementation of robots CAN not save existing jobs

B : implementation of robots CAN not create new jobs

C : robotics could prevent a business from closing

D : robotics could not prevent a business from closing

**Q.no 44. Which of the following sensor is used to monitor the motor activities?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 45. Which of the following sensor is not used to measure the distance?**

A : Radar

B : Sonar

C : Laser Rangefinder

D : Intertial Sensor

**Q.no 46. Why do the robot need sensor?**

A : To collect information from environment

B : To map environment attribute to a quantitative measurement

C : only option 1 is true

D : Both option 1 and 2 are true

**Q.no 47. In a rule-based system procedural domain knowledge is in the form of**

A : Production rules

B : Rule interpreters

C : Meta-rules

D : control rules

**Q.no 48. What is reckoning**

A : Evaluating existing location

B : Evaluating Previous location

C : Information acquired

D : Finding the location

**Q.no 49. 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

**Q.no 50. To measure heat of an object which of the following sensor is used?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 51. For a robot unit to be considered a functional industrial robot, typically, how many degrees of freedom would the robot have?**

A : Three

B : Four

C : Six

D : Eight

**Q.no 52. The Vertical decomposition of the robotic control system is based on**

A : Sensing

B : Sensing and Planning

C : Sensing and Acting

D : Sensing, Planning and Acting

**Q.no 53. Which of the following robotic control paradigm make use of planning?**

A : Horizontal and Vertical

B : Vertical and Hybrid

C : Horizontal and Hybrid

D : Horizontal, Vertical and Hybrid

**Q.no 54. Which of the following work is done by General purpose Robot?**

A : Part drive

B : Welding

C : Spray picking

D : Part panting

**Q.no 55. What is the name for space inside which a robot unit operates?**

A : Environment

B : Spatial base

C : Work envelop

D : Exclusion zone

**Q.no 56. Triangulation problem is defined as**

A : Side-side-side

B : Side-angle-side

C : Both a&b

D : Side-by-side

**Q.no 57. PROLOG is an AI programming language which solves problems with a form of symbolic logic known as predicate calculus. It was developed in 1972 at the University of Marseilles by a team of specialists. Can you name the person who headed this team?**

A : Alain colmerauer

B : Niklaus Wirth

C : Seymour papert

D : John McCarthy

**Q.no 58. 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 : Controller

C : Arm

D : End effector

**Q.no 59. The horizontal decomposition of robotic control system is based on**

A : Sensing

B : Sensing and Planning

C : Sensing and Acting

D : Sensing, Planning and Acting

**Q.no 60. When will Hill-Climbing algorithm terminate?**

A : Stopping criterion met

B : Global Min/Max is achieved

C : No neighbour has higher value

D : no criteria to terminate

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**Answer for Question No 1. is c**

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**Answer for Question No 2. is a**

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**Answer for Question No 3. is d**

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**Answer for Question No 4. is b**

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**Answer for Question No 5. is a**

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**Answer for Question No 6. is a**

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**Answer for Question No 7. is b**

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**Answer for Question No 8. is b**

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**Answer for Question No 9. is a**

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**Answer for Question No 10. is c**

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**Answer for Question No 11. is b**

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**Answer for Question No 12. is b**

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**Answer for Question No 13. is b**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is c**

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**Answer for Question No 16. is b**



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**Answer for Question No 17. is a**

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**Answer for Question No 18. is a**

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**Answer for Question No 19. is d**

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**Answer for Question No 20. is d**

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**Answer for Question No 21. is a**

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**Answer for Question No 22. is a**

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**Answer for Question No 23. is c**

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**Answer for Question No 25. is a**

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**Answer for Question No 26. is a**

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**Answer for Question No 27. is a**

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**Answer for Question No 28. is a**

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**Answer for Question No 29. is c**

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**Answer for Question No 30. is a**

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**Answer for Question No 31. is d**

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**Answer for Question No 32. is a**

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**Answer for Question No 33. is a**

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**Answer for Question No 34. is d**

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**Answer for Question No 35. is a**

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**Answer for Question No 36. is b**

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**Answer for Question No 37. is a**

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**Answer for Question No 38. is b**

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**Answer for Question No 39. is a**

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**Answer for Question No 40. is c**

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**Answer for Question No 41. is b**

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**Answer for Question No 42. is b**

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**Answer for Question No 43. is c**

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**Answer for Question No 44. is b**

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**Answer for Question No 45. is d**

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**Answer for Question No 46. is d**

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**Answer for Question No 47. is a**

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**Answer for Question No 48. is a**

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**Answer for Question No 49. is b**

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**Answer for Question No 50. is c**

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**Answer for Question No 51. is c**

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**Answer for Question No 52. is b**

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**Answer for Question No 53. is c**

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**Answer for Question No 54. is b**

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**Answer for Question No 57. is a**

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**Answer for Question No 58. is b**

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**Answer for Question No 59. is d**

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11363\_Artificial Intelligence and Robotics

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A : Automated guided Vehical

B : Automated grid Vehical

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B : Radar

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**Q.no 10. The sensor that requires physical touch of an object is called**

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**Q.no 11. Which of the following sensor work based on sound navigation ranging?**

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B : Radar

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**Q.no 12. Natural or artificial can be category of**

A : Localization

B : Landmarks classes

C : Pose evalution

D : Robot

**Q.no 13. Local localization follows the location of a robots from**

A : Initial Point

B : Final Point

C : Middle point

D : End point

**Q.no 14. Best-First search is a type of informed search, which of the following principle used to choose the best next node for expansion**

A : Evaluation function returning lowest evaluation

B : Evaluation function returning highest evaluation

C : Evaluation function returning lowest & highest evaluation

D : no evaluation function

**Q.no 15. Which of the following is an example of infrared sensor?**

A : Thermometer

B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 16. What is Global Hawk**

A : Atonomous aircraft

B : Aircraft

C : Airopplan

D : Robot

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**Q.no 18. What is GPS**

A : Global Positioning system

B : Global Point System

C : Global System

D : Global path System

**Q.no 19. Which is level of performance**

A : Driving system

B : Convoy system

C : Convoy assistant

D : Automatic guided Vehical

**Q.no 20. A device that is used to detect event or changes in the environment is called**

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B : Middleware

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D : Transducer

**Q.no 21. Best-First search can be implemented using the following data structure**

A : Queue

B : Stack

C : Priority Queue

D : Circular Queue

**Q.no 22. Which sensor is used in today's mobile phone screen?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 23. What is the evaluation function in greedy approach?**



A : Heuristic function

B : Path cost from start node to current node

C : Path cost from start node to current node + Heuristic cost

D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 24. Which of the following search strategy uses a problem specific knowledge**

A : uninformed Search

B : Breadth-First-Search

C : Heuristic Search

D : Best search

**Q.no 25. What is EKF**

A : Existence Kalman filter

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C : Each Kalman filter

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A : Mapping without localization

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D : Geometric Maps

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A : Robot pose

B : Robot action

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D : Robot path

**Q.no 28. To measure heat of an object which of the following sensor is used?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 29. Which localization does not require any previous information**

A : Absolute

B : Local

C : Global

D : Passive

**Q.no 30. If a robot can alter its own trajectory in response to external conditions it is considered to be**

A : Intelligent

B : Mobile

C : Open loop

D : Non-servo

**Q.no 31. Natural Environment are not particularly organized or skilled for**

A : Machines

B : Robots

C : Path finding

D : Odometry

**Q.no 32. Which of the following is NOT one of the advantages associated with a robotics implementation program?**

A : Low costs for hardware and software

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A : Thermometer

B : Accelerometer

C : Touch screen

D : TV Remote

**Q.no 34. 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

**Q.no 35. Which of the following sensor is not used to measure the distance?**

A : Radar

B : Sonar

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**Q.no 36. Which is mode of mining**

A : Close pit mining

B : Mining

C : Pit Mining

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- B : Landmarks classes
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**Q.no 40. what is heuristic function**

- A : Lowest path cost
- B : Cheapest path from root to goal node
- C : Average path cost
- D : Estimated cost of cheapest path from root to goal node

**Q.no 41. Which of the following laws is ASIMOV'S first and most important law of robotics?**

- A : Robot actions must never result in damage to the robot
- B : Robots must never take actions harmful to humans
- C : Robot must follow the directions given by human
- D : Robots must make business a greater profit

**Q.no 42. With regard to the physics of power systems used operate robots, which statement or statements are most correct?**

- A : hydraulics involves the compression of liquids
- B : hydraulics involves the compression of air
- C : pneumatic involves the compression of air

D : chemical batteries produce AC power

**Q.no 43. Which of the following terms refers to the rotational motion of a robot arm**

A : Swivel

B : Axle

C : Retrograde

D : Roll

**Q.no 44. Who work on space Robotics mission**

A : NASA

B : IBM

C : Google

D : Yahoo

**Q.no 45. The device that is used to convert energy from one form to another is called**

A : Emitter

B : Transducer

C : Transmitter

D : Receiver

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D : Both option 1 and 2 are true

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A : Evaluating existing location

B : Evaluating Previous location

C : Information acquired

D : Finding the location

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A : Thermometer

B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 51. Topological Maps referred as**

A : Relational maps

B : Geomatic Maps

C : Perceptul maps

D : Sensorial maps

**Q.no 52. The following is true for a Robot & 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 : Programming is not same for both

**Q.no 53. The main objective (s) of Industrial robot is to**

A : To maximize the labor requirement

B : To increase productivity

C : To decrease the life of production machines

D : To decrease productivity

**Q.no 54. Internal state sensors are used for measuring which of below parameter of the end effector.**

A : Position

B : Position & Velocity

C : Velocity & acceleration

D : Position, Velocity & acceleration

**Q.no 55. Which of the following is the serial robot?**

A : Commercial robot

B : Industrial robot

C : In-house robot

D : Mobile Robot

**Q.no 56. Which of the following module is not related to horizontal decomposition?**

A : Perception

B : Planning

C : Execute

D : Building Map

**Q.no 57. Triangulation problem is defined as**

A : Side-side-side

B : Side-angle-side

C : Both a&b

D : Side-by-side

**Q.no 58. Industrial Robots are generally to designed to carry which of the following coordinate system(s).**

A : Cartesian coordinate systems

B : Polar systems.

C : Cylindrical systems

D : Spherical Sytem

**Q.no 59. Radial movement (in & out) to the manipulator arm is provided by**

A : Elbow extension

B : Wrist bend

C : Wrist swivel

D : Wrist yaw

**Q.no 60. Robot is derived from Czech word**

A : Rabota

B : Robota

C : Rebota

D : Ribota



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**Answer for Question No 1. is c**

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**Answer for Question No 2. is a**

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**Answer for Question No 3. is a**

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**Answer for Question No 4. is d**

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**Answer for Question No 5. is a**

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**Answer for Question No 6. is a**

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**Answer for Question No 7. is b**

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**Answer for Question No 8. is c**

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**Answer for Question No 9. is b**

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**Answer for Question No 10. is a**

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**Answer for Question No 11. is a**

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**Answer for Question No 12. is b**

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**Answer for Question No 13. is a**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is d**

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**Answer for Question No 16. is a**

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**Answer for Question No 17. is a**

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**Answer for Question No 18. is a**

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**Answer for Question No 19. is b**

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**Answer for Question No 20. is a**

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**Answer for Question No 21. is c**

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**Answer for Question No 22. is a**

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**Answer for Question No 23. is a**

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**Answer for Question No 24. is c**

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**Answer for Question No 25. is b**

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**Answer for Question No 26. is a**

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**Answer for Question No 27. is a**

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**Answer for Question No 28. is c**

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**Answer for Question No 29. is c**

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**Answer for Question No 30. is a**

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**Answer for Question No 31. is b**

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**Answer for Question No 32. is a**

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**Answer for Question No 34. is d**

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**Answer for Question No 35. is d**

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**Answer for Question No 36. is d**

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**Answer for Question No 37. is a**

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**Answer for Question No 38. is a**

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**Answer for Question No 39. is a**

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**Answer for Question No 40. is d**

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**Answer for Question No 41. is b**

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**Answer for Question No 42. is c**

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**Answer for Question No 44. is a**

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**Answer for Question No 45. is b**

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**Answer for Question No 46. is b**

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**Answer for Question No 47. is a**

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**Answer for Question No 48. is d**

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**Answer for Question No 49. is a**

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**Answer for Question No 50. is a**

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**Answer for Question No 51. is a**

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**Answer for Question No 52. is a**

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**Answer for Question No 53. is b**

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**Answer for Question No 54. is d**

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**Answer for Question No 55. is b**

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**Answer for Question No 56. is d**

---

**Answer for Question No 57. is c**

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**Answer for Question No 58. is a**

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**Answer for Question No 59. is a**

---

**Answer for Question No 60. is b**

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Total number of questions : 60

11363\_Artificial Intelligence and Robotics

Time : 1hr

Max Marks : 50

N.B

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- 

**Q.no 1. Which of the following is an example of infrared sensor?**

A : Thermometer

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C : Gyroscope

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A : Horizontal geometric dilution of position

B : Horizontal geometric dilution of precision

C : Vertical geometric dilution of precision

D : Vertical geometric dilution of position

**Q.no 3. Which of the following sensor make use of light emitting diode?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 4. What is EKF**

A : Existence Kalman filter

B : Extended Kalman Filter

C : Each Kalman filter

D : Evaluation Kalman Filter

**Q.no 5. The sensor that sends out sound pulses called pings, then receives the returning sound echo is called**

A : Active Sonar

B : Passive Sonar

C : Radar

D : Laser Rangefinder

**Q.no 6. Which of the following sensor work based on sound navigation ranging?**

A : Sonar

B : Radar

C : Inertial

D : Biosensor

**Q.no 7. Adaptive localization at multiple scales is a technique of**

A : Recursive filtering

B : Filtering

C : Landmark

D : Pose estimation

**Q.no 8. Which is type of Robotics Perception**

A : Map related

B : Path related

C : Position related

D : Edge related

**Q.no 9. A device that is used to detect event or changes in the environment is called**

A : Sensor

B : Middleware

C : Actuator

D : Transducer

**Q.no 10. Natural or artificial can be category of**

A : Localization

B : Landmarks classes

C : Pose evaluation

D : Robot

**Q.no 11. Weighted voting of correction vectors is a technique of**

A : Recursive filtering

B : Filtering

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**Q.no 12. What is AGV**

A : Automated guided Vehical

B : Automated grid Vehical

C : Automated grid Van

D : Automatic guided Vehical

**Q.no 13. Which is level of performance**

A : Driving system

B : Convoy system

C : Convoy assistant

D : Automatic guided Vehical

**Q.no 14. Who work on space Robotics mission**

A : Soviet

B : IBM

C : Google

D : Yahoo

**Q.no 15. What is GPS**

A : Global Positioning system

B : Global Point System

C : Global System

D : Global path System

**Q.no 16. Which sensor is used in today's mobile phone screen?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 17. Robots Localization indicates the robots**

A : Performance

B : Capability

C : Direction

D : Measurements

**Q.no 18. SONAR is example of**



A : Video sensing

B : GPS

C : Robot

D : Machine

**Q.no 19. The robot that repeats the same motions according to recorded information is called**

A : Fixed Sequence Robot

B : Variable sequence robot

C : Playback Robot

D : Numerical Control robot

**Q.no 20. Which of the following is not functionality of robotics?**

A : Re-programmability

B : Multi-functionality

C : Efficient performance

D : Responsibility

**Q.no 21. Which of the following branch process with sensory feedback in robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Electronics Engineering

**Q.no 22. Which of the following sensor is most suitable for clinical, agricultural and food industry?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 23. What is Global Hawk**

A : Atonomous aircraft

B : Aircraft

C : Airopplan

D : Robot

**Q.no 24. Which of the following sensor work based on radio detection and ranging?**

A : Sonar

B : Radar

C : Intertial

D : Biosensor

**Q.no 25. Best-First search is a type of informed search, which of the following principle used to choose the best next node for expansion**

A : Evaluation function returning lowest evaluation

B : Evaluation function returning highest evaluation

C : Evaluation function returning lowest & highest evaluation

D : no evaluation function

**Q.no 26. To measure heat of an object which of the following sensor is used?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 27. Sensor based servoing associate with**

A : Robot pose

B : Robot action

C : Robot position

D : Robat path

**Q.no 28. Which localization does not require any previous information**

A : Absolute

B : Local

C : Global

D : Passive

**Q.no 29. Convergenese of the estimates is a technique of**

A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 30. Which of the following is NOT one of the advantages associated with a robotics implementation program?**

A : Low costs for hardware and software

B : Robots work continuously around the clock

C : Quality of manufactured goods can be improved

D : Reduced company cost for worker fringe benefits

**Q.no 31. 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

**Q.no 32. 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

**Q.no 33. Why do the robot need sensor?**

A : To collect information from environment

B : To map environment attribute to a quantitative measurement

C : only option 1 is true

D : Both option 1 and 2 are true

**Q.no 34. Image based servoing associate with**

A : Robot pose

B : Robot action

C : Robot position

D : Robot path

**Q.no 35. What is odometry**

A : Information acquired

B : estimation

C : Calculation

D : Motion Sensors

**Q.no 36. If something is open or closed in the system then it is informed by following sensor.**

A : Contact Sensor

B : Inertial Sensor

C : Sonar Sensor

D : Biosensor

**Q.no 37. what is heuristic function**

A : Lowest path cost

B : Cheapest path from root to goal node

C : Average path cost

D : Estimated cost of cheapest path from root to goal node

**Q.no 38. Which is fundamental approach of mapping**

A : Loop Closing

B : Sensorial maps

C : Perceptual maps

D : Geometric Maps

**Q.no 39. Which is type of Robotics Perception**

A : Marker related

B : Map related

C : Path related

D : Position related

**Q.no 40. Servoing is generally used to enable**

A : Path

B : Position

C : Robot

D : Direction

**Q.no 41. Robot that perform the successive stages of a task according to predetermined, unchanging method is called as**

A : Fixed Sequence Robot

B : Variable sequence robot

C : Playback Robot

D : Numerical Control robot

**Q.no 42. Which of the following is an example of inertia sensor?**

A : Thermometer

B : Accelerometer

C : Touch screen

D : TV Remote

**Q.no 43. Which is mode of mining**

A : Close pit mining

B : Mining

C : Pit Mining

D : Underground Mining

**Q.no 44. Active or inactive can be category of**

A : Localization

B : Landmarks classes

C : pose evaluation

D : Robot

**Q.no 45. Which of the following statements concerning the implementation of robotic systems is correct?**

A : implementation of robots CAN not save existing jobs

B : implementation of robots CAN not create new jobs

C : robotics could prevent a business from closing

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**Q.no 49. Which of the following laws is ASIMOV'S first and most important law of robotics?**

A : Robot actions must never result in damage to the robot

B : Robots must never take actions harmful to humans

C : Robot must follow the directions given by human

D : Robots must make business a greater profit

**Q.no 50. Which of the following sensor uses a laser beam to determine the distance to an object?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 51. The number of moveable joints in the base, the arm, and the end effectors of the robot determines**

A : degrees of freedom

B : payload capacity

C : operational limits

D : flexibility

**Q.no 52. What is the name for space inside which a robot unit operates?**

A : Environment

B : Spatial base

C : Work envelop

D : Exclusion zone

**Q.no 53. A Kalman filter is useful in**

A : Merging position

B : Merging pose estimate

C : Merging path

D : Merging revoking

**Q.no 54. Radial movement (in & out) to the manipulator arm is provided by**

A : Elbow extension

B : Wrist bend

C : Wrist swivel

D : Wrist yaw

**Q.no 55. Which of the following is the serial robot?**

A : Commercial robot

B : Industrial robot

C : In-house robot

D : Mobile Robot

**Q.no 56. In which of the following operations Continuous Path System is used**

A : Pick & Place

B : Loading & unloading

C : Continuous welding

D : Pick and Loading

**Q.no 57. Which of the following module is not related to horizontal decomposition?**

A : Perception



B : Planning

C : Execute

D : Building Map

**Q.no 58. The Vertical decomposition of the robotic control system is based on**

A : Sensing

B : Sensing and Planning

C : Sensing and Acting

D : Sensing, Planning and Acting

**Q.no 59. Practical sensor domensions which is referred as**

A : Homing

B : servoing

C : Robat action

D : Pose estimation

**Q.no 60. The Robot designed with Polar coordinate system has**

A : Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

D : Two rotational & one liner movement

---

**Answer for Question No 1. is d**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is a**

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**Answer for Question No 16. is a**

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**Answer for Question No 17. is b**

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**Answer for Question No 18. is b**

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**Answer for Question No 19. is c**

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**Answer for Question No 20. is d**

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**Answer for Question No 21. is a**

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**Answer for Question No 22. is d**

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**Answer for Question No 25. is a**

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**Answer for Question No 26. is c**

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**Answer for Question No 40. is c**

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**Answer for Question No 41. is a**

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11363\_Artificial Intelligence and Robotics

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**Q.no 1. What is EKF**

A : Existance Kalman filter

B : Extended Klaman Filter

C : Each Kalman filter

D : Evalution Kalman Filter

**Q.no 2. What is GPS**

A : Global Positioning system

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A : Automated guided Vehical

B : Automated grid Vehical

C : Automated grid Van

D : Automatic guided Vehical

**Q.no 4. A\* algorithm is based on which of the following concept?**

A : Best-First-Search

B : Breadth-First-Search

C : Depth-First –Search

D : Hill climbing

**Q.no 5. Best-First search can be implemented using the following data structure**

A : Queue

B : Stack

C : Priority Queue

D : Circular Queue

**Q.no 6. Which of the following sensor work based on sound navigation ranging?**

A : Sonar

B : Radar

C : Intertial

D : Biosensor

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A : Driving system

B : Convoy system

C : Convoy assistant

D : Automatic guided Vehical

**Q.no 10. 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

**Q.no 11. Which of the following is an example of infrared sensor?**

A : Thermometer

B : Accelerometer

C : Gyroscope

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**Q.no 12. Adaptive localization at multiple scales is a technique of**

A : Recursive filtering

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- A : Horizontal geometric dilution of position
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**Q.no 14. What is Global Hawk**

- A : Atonomous aircraft
- B : Aircraft
- C : Airopplan
- D : Robot

**Q.no 15. Which of the following is a visual sensor?**

- A : Laser Rangefinder
- B : Radar
- C : Smart Camera
- D : Sonar

**Q.no 16. Which of the following sensor make use of light emitting diode?**

- A : Sonar
- B : Radar
- C : Infrared
- D : Laser Rangefinder

**Q.no 17. Which of the following branch is not a parts of robotics?**

- A : Computer Engineering
- B : Mechanical Engineering
- C : Electrical Engineering
- D : Chemical Engineering

**Q.no 18. Robots Localization indicates the robots**

A : Performance

B : Capability

C : Direction

D : Measurements

**Q.no 19. Which sensor is used in today's mobile phone screen?**

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D : Biosensor

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A : Soviet

B : IBM

C : Google

D : Yahoo

**Q.no 21. The sensor that requires physical touch of an object is called**

A : Contact Sensor

B : Inertial Sensors

C : Infrared Sensor

D : Laser Rangefinder

**Q.no 22. Which of the following is not advantage of robotics?**

A : Greater flexibility and re-programmability

B : Greater response time to inputs than human

C : Greater unemployment

D : Improved product quality

**Q.no 23. Weighted voting of correction vectors is a technique of**

A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 24. Which of the following is not true?**

A : For robotics, you should have a knowledge of different sensors

B : For robotics, you must be able to write different planning algorithms

C : For robotics, you may have to use actuators

D : For robotics, you do not require help of computer engineers, mechanical engineers and electrical engineers

**Q.no 25. What is the evaluation function in greedy approach?**

A : Heuristic function

B : Path cost from start node to current node

C : Path cost from start node to current node + Heuristic cost

D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 26. what is heuristic function**

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A : Open pit mining

B : Close pit mining

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B : To map environment attribute to a quantitative measurement

C : only option 1 is true

D : Both option 1 and 2 are true

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C : Infrared Sensor

D : Biosensor

**Q.no 32. What is necessary for a lot of sensible mobile robotics function**

A : Map discovery

B : Geometric Maps

C : Perceptual maps

D : Sensorial maps

**Q.no 33. What is reckoning**

- A : Evaluating existing location
- B : Evaluating Previous location
- C : Information acquired
- D : Finding the location

**Q.no 34. The sensor that receive sound echoes without transmitting their own sound signals is called**

- A : Active Sonar
- B : Passive Sonar
- C : Radar
- D : Laser Rangefinder

**Q.no 35. Which of the following terms refers to the rotational motion of a robot arm**

- A : Swivel
- B : Axle
- C : Retrograde
- D : Roll

**Q.no 36. 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

**Q.no 37. Which is type of Robotics Perception**

- A : Marker related
- B : Map related
- C : Path related
- D : Position related

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A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 39. Natural Enviroment are not particularly organized or skilled for**

A : Machines

B : Robots

C : Path finding

D : Odometry

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**Q.no 42. The Signals which represent 2D & 3D odjects gathered from sensor data are referred as**

A : Relational maps

B : Sensorial maps

C : Perceptul maps

D : Geomatic Maps

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A : Localization

B : Landmarks classes

C : pose evaluation

D : Robot

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C : Transmitter

D : Receiver

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D : Laser Rangefinder

**Q.no 46. 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

**Q.no 47. In a rule-based system procedural domain knowledge is in the form of**

A : Production rules

B : Rule interpreters

C : Meta-rules

D : control rules

**Q.no 48. If a robot can alter its own trajectory in response to external conditions it is considered to be**

A : Intelligent

B : Mobile

C : Open loop

D : Non-servo

**Q.no 49. Which of the following laws is ASIMOV'S first and most important law of robotics?**

A : Robot actions must never result in damage to the robot

B : Robots must never take actions harmful to humans

C : Robot must follow the directions given by human

D : Robots must make business a greater profit

**Q.no 50. Which is mode of mining**

A : Close pit mining

B : Mining

C : Pit Mining

D : Underground Mining

**Q.no 51. Which of the following work is done by General purpose Robot?**

A : Part drive

B : Welding

C : Spray picking

D : Part panting

**Q.no 52. What is the name for space inside which a robot unit operates?**

A : Environment



B : Spatial base

C : Work envelop

D : Exclusion zone

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A : Heuristic function

B : Path cost from start node to current node

C : Path cost from start node to current node + Heuristic cost

D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 55. The following drive is used for lighter class of robot.**

A : Pneumatic drive

B : Hydrometric drive

C : Electric drive

D : Mechanical drive

**Q.no 56. The Robot designed with Cylindrical coordinate system has**

A : A Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

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**Q.no 57. Radial movement (in & out) to the manipulator arm is provided by**

A : Elbow extension

B : Wrist bend

C : Wrist swivel

D : Wrist yaw

**Q.no 58. For a robot unit to be considered a functional industrial robot, typically, how many degrees of freedom would the robot have?**

A : Three

B : Four

C : Six

D : Eight

**Q.no 59. Triangulation problem is defined as**

A : Side-side-side

B : Side-angle-side

C : Both a&b

D : Side-by-side

**Q.no 60. A Kalman filter is useful in**

A : Merging position

B : Merging pose estimate

C : Merging path

D : Merging revoking

---

**Answer for Question No 1. is b**

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**Answer for Question No 2. is a**

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**Answer for Question No 3. is a**

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**Answer for Question No 4. is a**

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**Answer for Question No 5. is c**

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**Answer for Question No 6. is a**

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**Answer for Question No 7. is d**

---

**Answer for Question No 8. is a**

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**Answer for Question No 9. is b**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is c**

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**Answer for Question No 16. is c**

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**Answer for Question No 17. is d**

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**Answer for Question No 18. is b**

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**Answer for Question No 19. is a**

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**Answer for Question No 20. is a**

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**Answer for Question No 21. is a**

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**Answer for Question No 22. is c**

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**Answer for Question No 23. is a**

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**Answer for Question No 24. is d**

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**Answer for Question No 25. is a**

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**Answer for Question No 26. is d**

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**Answer for Question No 27. is a**

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**Answer for Question No 28. is a**

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**Answer for Question No 29. is c**

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**Answer for Question No 31. is b**

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**Answer for Question No 38. is a**

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**Answer for Question No 39. is b**

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**Answer for Question No 40. is b**

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**Answer for Question No 41. is a**

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**Answer for Question No 42. is d**

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**Answer for Question No 43. is b**

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**Answer for Question No 44. is b**

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**Answer for Question No 45. is c**

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**Answer for Question No 46. is b**

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**Answer for Question No 47. is a**

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**Answer for Question No 48. is a**

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**Answer for Question No 49. is b**

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**Answer for Question No 50. is d**

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**Answer for Question No 51. is b**

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**Answer for Question No 52. is c**

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**Answer for Question No 53. is b**

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**Answer for Question No 54. is c**

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**Answer for Question No 55. is a**

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**Answer for Question No 56. is c**

---

**Answer for Question No 57. is a**

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**Answer for Question No 58. is c**

---

**Answer for Question No 59. is c**

---

**Answer for Question No 60. is b**

---

Total number of questions : 60

11363\_Artificial Intelligence and Robotics

Time : 1hr

Max Marks : 50

N.B

- 1) All questions are Multiple Choice Questions having single correct option.
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- 

**Q.no 1. Which of the following sensor work based on radio detection and ranging?**

- A : Sonar
- B : Radar
- C : Intertial
- D : Biosensor

**Q.no 2. what is HDOP**

- A : Horizontal geometric dilution of position
- B : Horizontal geometric dilution of precision
- C : Vertical geometric dilution of precision
- D : Vertical geometric dilution of position

**Q.no 3. The sensor that requires physical touch of an object is called**

- A : Contact Sensor
- B : Inertial Sensors
- C : Infrared Sensor
- D : Laser Rangefinder

**Q.no 4. Best-First search can be implemented using the following data structure**

- A : Queue
- B : Stack
- C : Priority Queue
- D : Circular Queue

**Q.no 5. Which is type of Robotics Perception**

- A : Map related
- B : Path related
- C : Position related
- D : Edge related

**Q.no 6. What is the evaluation function in greedy approach?**

- A : Heuristic function
- B : Path cost from start node to current node
- C : Path cost from start node to current node + Heuristic cost
- D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 7. Classification of data points is a technique of**

- A : Recursive filtering
- B : Filtering
- C : Landmark
- D : Pose estimation

**Q.no 8. Which of the following sensor make use of light emitting diode?**



A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 9. A device that is used to detect event or changes in the environment is called**

A : Sensor

B : Middleware

C : Actuator

D : Transducer

**Q.no 10. Which sensor is used in today's mobile phone screen?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 11. Adaptive localization at multiple scales is a technique of**

A : Recursive filtering

B : Filtering

C : Landmark

D : Pose estimation

**Q.no 12. The robot that repeats the same motions according to recorded information is called**

A : Fixed Sequence Robot

B : Variable sequence robot

C : Playback Robot

D : Numerical Control robot

**Q.no 13. Robots Localization indicates the robots**

A : Performance

B : Capability

C : Direction

D : Measurements

**Q.no 14. Which of the following branch process with sensory feedback in robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Electronics Engineering

**Q.no 15. 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 : Plateau climbing valley

**Q.no 16. Which is level of performance**

A : Driving system

B : Convoy system

C : Convoy assistant

D : Automatic guided Vehical

**Q.no 17. What is Global Hawk**

A : Atonomous aircraft

B : Aircraft

C : Airopplan

D : Robot

**Q.no 18. Local localization follows the location of a robots from**

A : Initial Point

B : Final Point

C : Middle point

D : End point

**Q.no 19. Who work on space Robotics mission**

A : Soviet

B : IBM

C : Google

D : Yahoo

**Q.no 20. Which of the following is an example of infrared sensor?**

A : Thermometer

B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 21. The sensor that sends out sound pulses called pings, then receives the returning sound echo is called**

A : Active Sonar

B : Passive Sonar

C : Radar

D : Laser Rangefinder

**Q.no 22. SONAR is example of**

A : Video sensing

B : GPS

C : Robot

D : Machine

**Q.no 23. Which of the following is not true?**

A : For robotics, you should have a knowledge of different sensors

B : For robotics, you must be able to write different planning algorithms

C : For robotics, you may have to use actuators

D : For robotics, you do not require help of computer engineers, mechanical engineers and electrical engineers

**Q.no 24. Best-First search is a type of informed search, which of the following principle used to choose the best next node for expansion**

A : Evaluation function returning lowest evaluation

B : Evaluation function returning highest evaluation

C : Evaluation function returning lowest & highest evaluation

D : no evaluation function

**Q.no 25. Which of the following branch is not a parts of robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Chemical Engineering

**Q.no 26. Which of the following sensor is not used to measure the distance?**

A : Radar

B : Sonar

C : Laser Rangefinder

D : Intertial Sensor

**Q.no 27. Why do the robot need sensor?**

A : To collect information from environment

B : To map environment attribute to a quantitative measurement

C : only option 1 is true

D : Both option 1 and 2 are true

**Q.no 28. Which is mode of mining**

A : Open pit mining

B : Close pit mining

C : Mining

D : Pit Mining

**Q.no 29. Which of the following statements concerning the implementation of robotic systems is correct?**

A : implementation of robots CAN not save existing jobs

B : implementation of robots CAN not create new jobs

C : robotics could prevent a business from closing

D : robotics could not prevent a business from closing

**Q.no 30. Algorithm used for path planning is**

A : Dijkstra's Algorithm

B : DFS Algorithm

C : BFS Algorithm

D : Searching Algorithm

**Q.no 31. 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

**Q.no 32. Which of the following sensor uses a laser beam to determine the distance to an object?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 33. Which is mode of mining**

A : Close pit mining

B : Mining

C : Pit Mining

D : Underground Mining

**Q.no 34. Which is fundamental approach of mapping**

A : Loop Closing

B : Sensorial maps

C : Perceptual maps

D : Geometric Maps

**Q.no 35. Robot that perform the successive stages of a task according to predetermined, unchanging method is called as**

A : Fixed Sequence Robot

B : Variable sequence robot

C : Playback Robot

D : Numerical Control robot

**Q.no 36. To measure heat of an object which of the following sensor is used?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 37. What is necessity for a lot of sensible mobile robotics function**

A : Map discovery

B : Geomatic Maps

C : Perceptul maps

D : Sensorial maps

**Q.no 38. Convergenese of the estimates is a technique of**

A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 39. Visual servoing associate with**

A : Robot pose

B : Robot action

C : Robot position

D : Robat path

**Q.no 40. Which of the following laws is ASIMOV'S first and most important law of robotics?**

A : Robot actions must never result in damage to the robot

B : Robots must never take actions harmful to humans

C : Robot must follow the directions given by human

D : Robots must make business a greater profit

**Q.no 41. In a rule-based system procedural domain knowledge is in the form of**

A : Production rules

B : Rule interpreters

C : Meta-rules

D : control rules

**Q.no 42. Sensor based servoing associate with**

A : Robot pose

B : Robot action

C : Robot position

D : Robot path

**Q.no 43. Which localization does not require any previous information**

A : Absolute

B : Local

C : Global

D : Passive

**Q.no 44. Who work on space Robotics mission**

A : NASA

B : IBM

C : Google

D : Yahoo

**Q.no 45. Which of the following sensor is used to monitor the motor activities?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 46. The device that is used to convert energy from one form to another is called**

A : Emitter

B : Transducer

C : Transmitter

D : Receiver

**Q.no 47. 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

**Q.no 48. 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

**Q.no 49. Which of the following is an example of contact sensor?**

A : Thermometer

B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 50. Which of the following is an example of inertia sensor?**

A : Thermometer

B : Accelerometer

C : Touch screen

D : TV Remote

**Q.no 51. The Robot designed with Polar coordinate system has**

A : Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

D : Two rotational & one liner movement

**Q.no 52. Which of the following robotic control paradigm make use of planning?**

A : Horizontal and Vertical

B : Vertical and Hybrid

C : Horizontal and Hybrid

D : Horizontal, Vertical and Hybrid

**Q.no 53. What is the evaluation function in A\* approach?**

A : Heuristic function

B : Path cost from start node to current node

C : Path cost from start node to current node + Heuristic cost

D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 54. Topological Maps referred as**

A : Relational maps

B : Geomatic Maps

C : Perceptul maps

D : Sensorial maps

**Q.no 55. Which of the following is not a programming language for computer controlled Robot?**

A : AMC

B : VAL

C : RAIL

D : HELP

**Q.no 56. Industrial Robots are generally to designed to carry which of the following coordinate system(s).**

A : Cartesian coordinate systems

B : Polar systems.

C : Cylindrical systems

D : Spherical Sytem

**Q.no 57. The Robot designed with Cartesian coordinate system has**

A : Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

D : Two rotational & one liner movement

**Q.no 58. If the dimension of search problem is very high then suitable algorithm for path planning is**

A : Dijkstra's Algorithm

B : A\* Algorithm

C : D\* Algorithm

D : Rapid-Exploring Random Tree (RRT)

**Q.no 59. Radial movement (in & out) to the manipulator arm is provided by**

A : Elbow extension

B : Wrist bend

C : Wrist swivel

D : Wrist yaw

**Q.no 60. Triagulation problem is defined as**

A : Side-side-side

B : Side-angle-side

C : Both a&b

D : Side-by-side

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**Answer for Question No 1. is b**

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**Answer for Question No 2. is b**

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**Answer for Question No 3. is a**

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**Answer for Question No 4. is c**

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**Answer for Question No 5. is d**

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**Answer for Question No 6. is a**

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**Answer for Question No 7. is a**

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**Answer for Question No 8. is c**

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**Answer for Question No 9. is a**

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**Answer for Question No 10. is a**

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**Answer for Question No 11. is a**

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**Answer for Question No 12. is c**

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**Answer for Question No 13. is b**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is b**

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**Answer for Question No 16. is b**

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**Answer for Question No 17. is a**

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**Answer for Question No 18. is a**

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**Answer for Question No 19. is a**

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**Answer for Question No 20. is d**

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**Answer for Question No 21. is a**

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**Answer for Question No 22. is b**

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**Answer for Question No 23. is d**

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**Answer for Question No 24. is a**

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**Answer for Question No 25. is d**

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**Answer for Question No 26. is d**

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**Answer for Question No 27. is d**

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**Answer for Question No 28. is a**

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**Answer for Question No 29. is c**

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**Answer for Question No 30. is a**

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**Answer for Question No 31. is b**

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**Answer for Question No 32. is d**

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**Answer for Question No 33. is d**

---

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**Answer for Question No 35. is a**

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**Answer for Question No 36. is c**

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**Answer for Question No 37. is a**

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**Answer for Question No 38. is a**

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**Answer for Question No 39. is a**

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**Answer for Question No 40. is b**

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**Answer for Question No 41. is a**

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**Answer for Question No 42. is a**

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**Answer for Question No 46. is b**

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**Answer for Question No 47. is a**

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**Answer for Question No 48. is c**

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**Answer for Question No 49. is a**

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**Answer for Question No 50. is b**

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**Answer for Question No 51. is d**

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**Answer for Question No 52. is c**

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**Answer for Question No 53. is c**

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**Answer for Question No 54. is a**

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**Answer for Question No 55. is a**

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**Answer for Question No 56. is a**

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**Answer for Question No 57. is a**

---

**Answer for Question No 58. is d**

---

**Answer for Question No 59. is a**

---

**Answer for Question No 60. is c**

---

Total number of questions : 60

11363\_Artificial Intelligence and Robotics

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**Q.no 1. Which of the following is not true?**

A : For robotics, you should have a knowledge of different sensors

B : For robotics, you must be able to write different planning algorithms

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**Q.no 2. Which of the following sensor make use of light emitting diode?**

A : Sonar

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A : Up-Hill Search

B : Hill-Climbing

C : Hill algorithm

D : Platue climbing valley

**Q.no 4. Which of the following search strategy uses a problem specific knowledge**

A : uninformed Search

B : Breadth-First-Search

C : Heuristic Search

D : Best search

**Q.no 5. Which sensor is used in today's mobile phone screen?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 6. SONAR is example of**

A : Video sensing

B : GPS

C : Robot

D : Machine

**Q.no 7. Which of the following branch process with sensory feedback in robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Electronics Engineering

**Q.no 8. Weighted voting of correction vectors is a technique of**

A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 9. What is AGV**

A : Automated guided Vehical

B : Automated grid Vehical

C : Automated grid Van

D : Automatic guided Vehical

**Q.no 10. What is GPS**

A : Global Positioning system

B : Global Point System

C : Global System

D : Global path System

**Q.no 11. Which of the following is not advantage of robotics?**

A : Greater flexibility and re-programmability

B : Greater response time to inputs than human

C : Greater unemployment

D : Improved product quality

**Q.no 12. Which of the following sensor work based on radio detection and ranging?**

A : Sonar

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C : Intertial

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**Q.no 13. Local localization follows the location of a robots from**

- A : Initial Point
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**Q.no 14. What is the evaluation function in greedy approach?**

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- C : Path cost from start node to current node + Heuristic cost
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**Q.no 15. Which is type of Robotics Perception**

- A : Map related
- B : Path related
- C : Position related
- D : Edge related

**Q.no 16. A\* algorithm is based on which of the following concept?**

- A : Best-First-Search
- B : Breadth-First-Search
- C : Depth-First –Search
- D : Hill climbing

**Q.no 17. Adaptive localization at multiple scales is a technique of**

- A : Recursive filtering
- B : Filtering
- C : Laandmark
- D : Pose estimation

**Q.no 18. Which of the following sensor is most suitable for clinical, agricultural and food industry?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 19. Best-First search can be implemented using the following data structure**

A : Queue

B : Stack

C : Priority Queue

D : Circular Queue

**Q.no 20. Who work on space Robotics mission**

A : Soviet

B : IBM

C : Google

D : Yahoo

**Q.no 21. Robots Localization indicates the robots**

A : Performance

B : Capability

C : Direction

D : Measurements

**Q.no 22. Natural or artificial can be category of**

A : Localization

B : Landmarks classes

C : Pose evaluation

D : Robot

**Q.no 23. what is HDOP**

A : Horizontal geometric dilution of position

B : Horizontal geometric dilution of precision

C : Vertical geometric dilution of precision

D : Vertical geometric dilution of position

**Q.no 24. Best-First search is a type of informed search, which of the following principle used to choose the best next node for expansion**

A : Evaluation function returning lowest evaluation

B : Evaluation function returning highest evaluation

C : Evaluation function returning lowest & highest evaluation

D : no evaluation function

**Q.no 25. What is Global Hawk**

A : Atonomous aircraft

B : Aircraft

C : Airopplan

D : Robot

**Q.no 26. If something is open or closed in the system then it is informed by followoing sensor.**

A : Contact Sensor

B : Inertial Sensor

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D : Biosensor

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A : Sensor

B : Middleware

C : Actuator

D : Transducer

**Q.no 29. Which of the following terms refers to the rotational motion of a robot arm**

A : Swivel

B : Axle

C : Retrograde

D : Roll

**Q.no 30. Why do the robot need sensor?**

A : To collect information from environment

B : To map environment attribute to a quantitative measurement

C : only option 1 is true

D : Both option 1 and 2 are true

**Q.no 31. Triangulation is a technique associate with**

A : Pose

B : Landmarks classes

C : Robot

D : Odometry

**Q.no 32. Natural Enviroment are not particularly organized or skilled for**

A : Machines

B : Robots

C : Path finding

D : Odometry

**Q.no 33. what is heuristic function**

A : Lowest path cost

B : Cheapest path from root to goal node

C : Average path cost

D : Estimated cost of cheapest path from root to goal node

**Q.no 34. To measure heat of an object which of the following sensor is used?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 35. Which is fundamental approach of mapping**

A : Loop Closing

B : Sensorial maps

C : Perceptual maps

D : Geometric Maps

**Q.no 36. The Signals which represent 2D & 3D objects gathered from sensor data are referred as**

A : Relational maps

B : Sensorial maps

C : Perceptual maps

D : Geometric Maps

**Q.no 37. 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

**Q.no 38. 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

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A : Emiter

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C : Transmitter

D : Receiver

**Q.no 41. Which of the following sensor uses a laser beam to determine the distance to an object?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 42. Which of the following is NOT one of the advantages associated with a robotics implementation program?**



- A : Low costs for hardware and software
- B : Robots work continuously around the clock
- C : Quality of manufactured goods can be improved
- D : Reduced company cost for worker fringe benefits

**Q.no 43. With regard to the physics of power systems used operate robots, which statement or statements are most correct?**

- A : hydraulics involves the compression of liquids
- B : hydraulics involves the compression of air
- C : pneumatic involves the compression of air
- D : chemical batteries produce AC power

**Q.no 44. Which of the following laws is ASIMOV'S first and most important law of robotics?**

- A : Robot actions must never result in damage to the robot
- B : Robots must never take actions harmful to humans
- C : Robot must follow the directions given by human
- D : Robots must make business a greater profit

**Q.no 45. What is odometry**

- A : Information acquired
- B : estimation
- C : Calculation
- D : Motion Sensors

**Q.no 46. Servoing is generally used to enable**

- A : Path
- B : Position
- C : Robot
- D : Diraction

**Q.no 47. Which localization does not require any previous information**

A : Absolute

B : Local

C : Global

D : Passive

**Q.no 48. Algorithm used for path planning is**

A : Dijkstra's Algorithm

B : DFS Algorithm

C : BFS Algorithm

D : Searching Algorithm

**Q.no 49. Which of the following is an example of contact sensor?**

A : Thermometer

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D : TV Remote

**Q.no 50. Which of the following sensor is used to monitor the motor activities?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 51. The Vertical decomposition of the robotic control system is based on**

A : Sensing

B : Sensing and Planning

C : Sensing and Acting

D : Sensing, Planning and Acting

**Q.no 52. In which of the following operations Continuous Path System is used**

A : Pick & Place

B : Loading & unloading

C : Continuous welding

D : Pick and Loading

**Q.no 53. Internal state sensors are used for measuring which of below parameter of the end effector.**

A : Position

B : Position & Velocity

C : Velocity & acceleration

D : Position, Velocity & acceleration

**Q.no 54. Triangulation problem is defined as**

A : Side-side-side

B : Side-angle-side

C : Both a&b

D : Side-by-side

**Q.no 55. What is the evaluation function in A\* approach?**

A : Heuristic function

B : Path cost from start node to current node

C : Path cost from start node to current node + Heuristic cost

D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 56. The Robot designed with Cylindrical coordinate system has**

A : A Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

D : Two rotational & one liner movement

**Q.no 57. A clearly different group of maps showing particular application to robots is called as**

A : Relational maps

B : Sensorial maps

C : Perceptul maps

D : Geomatric Maps

**Q.no 58. Clockwise of 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

**Q.no 59. Which of the following robotic control paradigm make use of planning?**

A : Horizontal and Vertical

B : Vertical and Hybrid

C : Horizontal and Hybrid

D : Horizontal, Vertical and Hybrid

**Q.no 60. Topological Maps referred as**

A : Relational maps

B : Geomatric Maps

C : Perceptul maps

D : Sensorial maps

---

**Answer for Question No 1. is d**

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**Answer for Question No 2. is c**

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**Answer for Question No 3. is b**

---

**Answer for Question No 4. is c**

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**Answer for Question No 5. is a**

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**Answer for Question No 6. is b**

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**Answer for Question No 7. is a**

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**Answer for Question No 8. is a**

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**Answer for Question No 9. is a**

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**Answer for Question No 10. is a**

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**Answer for Question No 11. is c**

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**Answer for Question No 12. is b**

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**Answer for Question No 13. is a**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is d**

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**Answer for Question No 16. is a**

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**Answer for Question No 17. is a**

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**Answer for Question No 18. is d**

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**Answer for Question No 19. is c**

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**Answer for Question No 20. is a**

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**Answer for Question No 21. is b**

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**Answer for Question No 22. is b**

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**Answer for Question No 23. is b**

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**Answer for Question No 24. is a**

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**Answer for Question No 25. is a**

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**Answer for Question No 26. is a**

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**Answer for Question No 27. is a**

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**Answer for Question No 28. is c**

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**Answer for Question No 29. is d**

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**Answer for Question No 30. is d**

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**Answer for Question No 31. is a**

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**Answer for Question No 32. is b**

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**Answer for Question No 33. is d**

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**Answer for Question No 34. is c**

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**Answer for Question No 35. is a**

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**Answer for Question No 36. is d**

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**Answer for Question No 37. is b**

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**Answer for Question No 38. is a**

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**Answer for Question No 39. is a**

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**Answer for Question No 40. is b**

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**Answer for Question No 41. is d**

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**Answer for Question No 42. is a**

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**Answer for Question No 43. is c**

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**Answer for Question No 44. is b**

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**Answer for Question No 45. is a**

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**Answer for Question No 46. is c**

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**Answer for Question No 47. is c**

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**Answer for Question No 48. is a**

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**Answer for Question No 49. is a**

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**Answer for Question No 50. is b**

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**Answer for Question No 51. is b**

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**Answer for Question No 52. is c**

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**Answer for Question No 53. is d**

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**Answer for Question No 54. is c**

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**Answer for Question No 55. is c**

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**Answer for Question No 56. is c**

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**Answer for Question No 57. is c**

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**Answer for Question No 58. is c**

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**Answer for Question No 59. is c**

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**Answer for Question No 60. is a**

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Total number of questions : 60

11363\_Artificial Intelligence and Robotics

Time : 1hr

Max Marks : 50

N.B

- 1) All questions are Multiple Choice Questions having single correct option.
  - 2) Attempt any 50 questions out of 60.
  - 3) Use of calculator is allowed.
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  - 7) Use only black/blue ball point pen to darken the appropriate circle.
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  - 9) Rough work shall not be done on OMR sheet or on question paper.
  - 10) Darken ONLY ONE CIRCLE for each answer.
- 

**Q.no 1. Which of the following is not advantage of robotics?**

- A : Greater flexibility and re-programmability
- B : Greater response time to inputs than human
- C : Greater unemployment
- D : Improved product quality

**Q.no 2. Which of the following is not true?**

- A : For robotics, you should have a knowledge of different sensors
- B : For robotics, you must be able to write different planning algorithms
- C : For robotics, you may have to use actuators
- D : For robotics, you do not require help of computer engineers, mechanical engineers and electrical engineers

**Q.no 3. Weighted voting of correction vectors is a technique of**

A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 4. Which of the following sensor is most suitable for clinical, agricultural and food industry?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 5. SONAR is example of**

A : Video sensing

B : GPS

C : Robot

D : Machine

**Q.no 6. Classification of data points is a technique of**

A : Recursive filtering

B : Filtering

C : Laandmark

D : Pose estimation

**Q.no 7. Natural or artificial can be category of**

A : Localization

B : Landmarks classes

C : Pose evalution

D : Robot

**Q.no 8. Local localization follows the location of a robots from**

- A : Initial Point
- B : Final Point
- C : Middle point
- D : End point

**Q.no 9. Best-First search can be implemented using the following data structure**

- A : Queue
- B : Stack
- C : Priority Queue
- D : Circular Queue

**Q.no 10. Robots Localization indicates the robots**

- A : Performance
- B : Capability
- C : Direction
- D : Measurements

**Q.no 11. Best-First search is a type of informed search, which of the following principle used to choose the best next node for expansion**

- A : Evaluation function returning lowest evaluation
- B : Evaluation function returning highest evaluation
- C : Evaluation function returning lowest & highest evaluation
- D : no evaluation function

**Q.no 12. A\* algorithm is based on which of the following concept?**

- A : Best-First-Search
- B : Breadth-First-Search
- C : Depth-First –Search
- D : Hill climbing

**Q.no 13. Who work on space Robotics mission**

A : Soviet

B : IBM

C : Google

D : Yahoo

**Q.no 14. What is the evaluation function in greedy approach?**

A : Heuristic function

B : Path cost from start node to current node

C : Path cost from start node to current node + Heuristic cost

D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 15. Which of the following search strategy uses a problem specific knowledge**

A : uninformed Search

B : Breadth-First-Search

C : Heuristic Search

D : Best search

**Q.no 16. Which of the following is a visual sensor?**

A : Laser Rangefinder

B : Radar

C : Smart Camera

D : Sonar

**Q.no 17. 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

**Q.no 18. What is GPS**

A : Global Positioning system

B : Global Point System

C : Global System

D : Global path System

**Q.no 19. Which of the following branch is not a parts of robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Chemical Engineering

**Q.no 20. Which of the following sensor work based on radio detection and ranging?**

A : Sonar

B : Radar

C : Intertial

D : Biosensor

**Q.no 21. Which of the following sensor make use of light emitting diode?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 22. What is AGV**

A : Automated guided Vehical

B : Automated grid Vehical

C : Automated grid Van

D : Automatic guided Vehical

**Q.no 23. What is EKF**

A : Existance Kalman filter

B : Extended Klaman Filter

C : Each Kalman filter

D : Evalution Kalman Filter

**Q.no 24. Which of the following branch process with sensory feedback in robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Electronics Engineering

**Q.no 25. The sensor that requires physical touch of an object is called**

A : Contact Sensor

B : Inertial Sensors

C : Infrared Sensor

D : Laser Rangefinder

**Q.no 26. Which of the following is NOT one of the advantages associated with a robotics implementation program?**

A : Low costs for hardware and software

B : Robots work continuously around the clock

C : Quality of manufactured goods can be improved

D : Reduced company cost for worker fringe benefits

**Q.no 27. Which of the following is an example of contact sensor?**

A : Thermometer

B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 28. Which of the following sensor uses a laser beam to determine the distance to an object?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 29. 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

**Q.no 30. If a robot can alter its own trajectory in response to external conditions it is considered to be**

A : Intelligent

B : Mobile

C : Open loop

D : Non-servo

**Q.no 31. 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

**Q.no 32. The device that is used to convert energy from one form to another is called**

A : Emitter

B : Transducer

C : Transmitter

D : Receiver

**Q.no 33. What is necessary for a lot of sensible mobile robotics function**

A : Map discovery

B : Geometric Maps

C : Perceptual maps

D : Sensorial maps

**Q.no 34. Servoing is generally used to enable**

A : Path

B : Position

C : Robot

D : Direction

**Q.no 35. In a rule-based system procedural domain knowledge is in the form of**

A : Production rules

B : Rule interpreters

C : Meta-rules

D : control rules

**Q.no 36. Visual servoing associate with**

A : Robot pose

B : Robot action

C : Robot position

D : Robot path

**Q.no 37. Triangulation is a technique associate with**



A : Pose

B : Landmarks classes

C : Robot

D : Odometry

**Q.no 38. The Signals which represent 2D & 3D odjects gathered from sensor data are referred as**

A : Relational maps

B : Sensorial maps

C : Perceptul maps

D : Geomatic Maps

**Q.no 39. With regard to the physics of power systems used operate robots, which statement or statements are most correct?**

A : hydraulics involves the compression of liquids

B : hydraulics involves the compression of air

C : pneumatic involves the compression of air

D : chemical batteries produce AC power

**Q.no 40. Which localization does not require any previous information**

A : Absolute

B : Local

C : Global

D : Passive

**Q.no 41. Which is mode of mining**

A : Close pit mining

B : Mining

C : Pit Mining

D : Underground Mining

**Q.no 42. 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

**Q.no 43. To measure heat of an object which of the following sensor is used?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 44. Which is fundamental approach of mapping**

A : Mapping without localization

B : Sensorial maps

C : Perceptual maps

D : Geometric Maps

**Q.no 45. If something is open or closed in the system then it is informed by following sensor.**

A : Contact Sensor

B : Inertial Sensor

C : Sonar Sensor

D : Biosensor

**Q.no 46. Which of the following is an example of inertia sensor?**

A : Thermometer

B : Accelerometer

C : Touch screen

D : TV Remote

**Q.no 47. What is reckoning**

A : Evaluating existing location

B : Evaluating Previous location

C : Information acquired

D : Finding the location

**Q.no 48. Which is type of Robotics Perception**

A : Marker related

B : Map related

C : Path related

D : Position related

**Q.no 49. Active or inactive can be category of**

A : Localization

B : Landmarks classes

C : pose evaluation

D : Robot

**Q.no 50. Which is mode of mining**

A : Open pit mining

B : Close pit mining

C : Mining

D : Pit Mining

**Q.no 51. Path planning algorithm is used for**

A : Environment Representation

B : Locate mobile robot

C : Finding shortest path and optimal path

D : Surround environment

**Q.no 52. Clockwise of 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

**Q.no 53. Robot is derived from Czech word**

A : Rabota

B : Robota

C : Rebota

D : Ribota

**Q.no 54. Drives are also known as**

A : Actuators

B : Controller

C : Sensors

D : Manipulator

**Q.no 55. Which of the following is the serial robot?**

A : Commercial robot

B : Industrial robot

C : In-house robot

D : Mobile Robot

**Q.no 56. Decision support programs are designed to help managers make**

A : Budget projections

B : Visual presentation

C : Business decisions

D : Vacation schedules

**Q.no 57. What is the evaluation function in A\* approach?**

A : Heuristic function

B : Path cost from start node to current node

C : Path cost from start node to current node + Heuristic cost

D : Average of Path cost from start node to current node and Heuristic cost

**Q.no 58. Triangulation problem is defined as**

A : Side-side-side

B : Side-angle-side

C : Both a&b

D : Side-by-side

**Q.no 59. Which of the following work is done by General purpose Robot?**

A : Part drive

B : Welding

C : Spray picking

D : Part panting

**Q.no 60. Practical sensor domensions which is referred as**

A : Homing

B : servoing

C : Robat action

D : Pose estimation

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**Answer for Question No 1. is c**

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**Answer for Question No 2. is d**

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**Answer for Question No 3. is a**

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**Answer for Question No 4. is d**

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**Answer for Question No 5. is b**

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**Answer for Question No 6. is a**

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**Answer for Question No 7. is b**

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**Answer for Question No 8. is a**

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**Answer for Question No 9. is c**

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**Answer for Question No 10. is b**

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**Answer for Question No 11. is a**

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**Answer for Question No 12. is a**

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**Answer for Question No 13. is a**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is c**

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**Answer for Question No 16. is c**

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**Answer for Question No 17. is b**

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**Answer for Question No 18. is a**

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**Answer for Question No 19. is d**

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**Answer for Question No 20. is b**

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**Answer for Question No 21. is c**

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**Answer for Question No 22. is a**

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**Answer for Question No 23. is b**

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**Answer for Question No 24. is a**

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**Answer for Question No 25. is a**

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**Answer for Question No 26. is a**

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**Answer for Question No 27. is a**

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**Answer for Question No 28. is d**

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**Answer for Question No 29. is b**

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**Answer for Question No 37. is a**

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**Answer for Question No 38. is d**

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**Answer for Question No 39. is c**

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**Answer for Question No 40. is c**

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**Answer for Question No 41. is d**

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**Answer for Question No 42. is b**

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**Answer for Question No 43. is c**

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**Answer for Question No 44. is a**

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**Answer for Question No 45. is a**

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**Answer for Question No 46. is b**

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**Answer for Question No 47. is a**

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**Answer for Question No 48. is a**

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**Answer for Question No 49. is b**

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**Answer for Question No 50. is a**

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**Answer for Question No 51. is c**

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**Answer for Question No 52. is c**

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**Answer for Question No 53. is b**

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**Answer for Question No 54. is a**

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**Answer for Question No 55. is b**

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**Answer for Question No 56. is c**

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**Answer for Question No 57. is c**

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**Answer for Question No 58. is c**

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**Answer for Question No 59. is b**

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**Answer for Question No 60. is a**

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Total number of questions : 60

11363\_Artificial Intelligence and Robotics

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**Q.no 1. Weighted voting of correction vectors is a technique of**

- A : Recursive filtering
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**Q.no 2. Which of the following sensor work based on sound navigation ranging?**

- A : Sonar
- B : Radar
- C : Intertial
- D : Biosensor

**Q.no 3. Which is level of performance**

A : Driving system

B : Convoy system

C : Convoy assistant

D : Automatic guided Vehical

**Q.no 4. what is GDOP**

A : Geometric dilution of position

B : Geometric dilution of precision

C : Geometric dilution of path

D : Geometric dilution of pointer

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B : Accelerometer

C : Gyroscope

D : TV Remote

**Q.no 9. A device that is used to detect event or changes in the environment is called**

A : Sensor

B : Middleware

C : Actuator

D : Transducer

**Q.no 10. The sensor that sends out sound pulses called pings, then receives the returning sound echo is called**

A : Active Sonar

B : Passive Sonar

C : Radar

D : Laser Rangefinder

**Q.no 11. The sensor that requires physical touch of an object is called**

A : Contact Sensor

B : Inertial Sensors

C : Infrared Sensor

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B : Horizontal geometric dilution of precision

C : Vertical geometric dilution of precision

D : Vertical geometric dilution of position

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A : Existance Kalman filter

B : Extended Klamam Filter

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B : Hill-Climbing

C : Hill algorithm

D : Plateau climbing valley

**Q.no 19. Which of the following branch is not a part of robotics?**

A : Computer Engineering

B : Mechanical Engineering

C : Electrical Engineering

D : Chemical Engineering

**Q.no 20. The robot that repeats the same motions according to recorded information is called**

A : Fixed Sequence Robot

B : Variable sequence robot

C : Playback Robot

D : Numerical Control robot

**Q.no 21. What is the evaluation function in greedy approach?**

A : Heuristic function

B : Path cost from start node to current node

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**Q.no 22. Which of the following is not an advantage of robotics?**

A : Greater flexibility and re-programmability

B : Greater response time to inputs than human

C : Greater unemployment

D : Improved product quality

**Q.no 23. Which of the following is not functionality of robotics?**

A : Re-programmability

B : Multi-functionality

C : Efficient performance

D : Responsibility

**Q.no 24. Local localization follows the location of a robots from**

A : Initial Point

B : Final Point

C : Middle point

D : End point

**Q.no 25. Who work on space Robotics mission**

A : Soviet

B : IBM

C : Google

D : Yahoo

**Q.no 26. In a rule-based system procedural domain knowledge is in the form of**

A : Production rules

B : Rule interpreters

C : Meta-rules

D : control rules

**Q.no 27. Robot that perform the successive stages of a task according to predetermined, unchanging method is called as**

A : Fixed Sequence Robot

B : Variable sequence robot

C : Playback Robot

D : Numerical Control robot

**Q.no 28. Triangulation is a technique associate with**

A : Pose

B : Landmarks classes

C : Robot

D : Odometry

**Q.no 29. Which is fundamental approache of mapping**

A : Loop Closing

B : Sensorial maps

C : Perceptul maps

D : Geomatic Maps

**Q.no 30. Why do the robot need sensor?**

A : To collect information from environment

B : To map environment atribute to a quantitative measurement

C : only option 1 is true

D : Both option 1 and 2 are true

**Q.no 31. With regard to the physics of power systems used operate robots, which statement or statements are most correct?**

A : hydraulics involves the compression of liquids

B : hydraulics involves the compression of air

C : pneumatic involves the compression of air

D : chemical batteries produce AC power

**Q.no 32. Which of the following laws is ASIMOV'S first and most important law of robotics?**

A : Robot actions must never result in damage to the robot



B : Robots must never take actions harmful to humans

C : Robot must follow the directions given by human

D : Robots must make business a greater profit

**Q.no 33. Which of the following sensor uses a laser beam to determine the distance to an object?**

A : Sonar

B : Radar

C : Infrared

D : Laser Rangefinder

**Q.no 34. The sensor that receive sound echoes without transmitting their own sound signals is called**

A : Active Sonar

B : Passive Sonar

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**Q.no 35. 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

**Q.no 36. Which is mode of mining**

A : Close pit mining

B : Mining

C : Pit Mining

D : Underground Mining

**Q.no 37. What is odometry**

A : Information acquired

B : estimation

C : Calculation

D : Motion Sensors

**Q.no 38. What is the necessity for a lot of sensible mobile robotics function?**

A : Map discovery

B : Geometric Maps

C : Perceptual maps

D : Sensorial maps

**Q.no 39. Which of the following is true?**

A : Robot minimize the labor cost

B : Robot minimize the productivity

C : Robot minimize the life of production machine

D : Robot minimize the quality of work

**Q.no 40. Which of the following sensor is used to monitor the motor activities?**

A : Contact Sensor

B : Inertial Sensor

C : Infrared Sensor

D : Biosensor

**Q.no 41. Which of the following is NOT one of the advantages associated with a robotics implementation program?**

A : Low costs for hardware and software

B : Robots work continuously around the clock

C : Quality of manufactured goods can be improved

D : Reduced company cost for worker fringe benefits

**Q.no 42. Which localization does not require any previous information?**

A : Absolute

B : Local

C : Global

D : Passive

**Q.no 43. Who work on space Robotics mission**

A : NASA

B : IBM

C : Google

D : Yahoo

**Q.no 44. Which of the following terms refers to the rotational motion of a robot arm**

A : Swivel

B : Axle

C : Retrograde

D : Roll

**Q.no 45. Servoing is generally used to enable**

A : Path

B : Position

C : Robot

D : Diraction

**Q.no 46. If a robot can alter its own trajectory in response to external conditions it is considered to be**

A : Intelligent

B : Mobile

C : Open loop

D : Non-servo

**Q.no 47. Algorihtm used for path planning is**

A : Dijkstra's Algorithm

B : DFS Algorithm

C : BFS Algorithm

D : Searching Algorithm

**Q.no 48. Imge based servoing associate with**

A : Robot pose

B : Robot action

C : Robot position

D : Robat path

**Q.no 49. 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

**Q.no 50. 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

**Q.no 51. The Robot designed with Polar coordinate system has**

A : Three linear movements

B : Three rotational movement

C : Two liner & one rotational movement

D : Two rotational & one liner movement

**Q.no 52. Path planning algorithm is used for**

- A : Environment Representation
- B : Locate mobile robot
- C : Finding shortest path and optimal path
- D : Surround environment

**Q.no 53. The main objective (s) of Industrial robot is to**

- A : To maximize the labor requirement
- B : To increase productivity
- C : To decrease the life of production machines
- D : To decrease productivity

**Q.no 54. In which of the following operations Continuous Path System is used**

- A : Pick & Place
- B : Loading & unloading
- C : Continuous welding
- D : Pick and Loading

**Q.no 55. Radial movement (in & out) to the manipulator arm is provided by**

- A : Elbow extension
- B : Wrist bend
- C : Wrist swivel
- D : Wrist yaw

**Q.no 56. Which of the following places would be LEAST likely to include operational robots?**

- A : Warehouse
- B : Factory
- C : Hospitals
- D : Private homes

**Q.no 57. When will Hill-Climbing algorithm terminate?**

- A : Stopping criterion met
- B : Global Min/Max is achieved
- C : No neighbour has higher value
- D : no criteria to terminate

**Q.no 58. Which of the following work is done by General purpose Robot?**

- A : Part drive
- B : Welding
- C : Spray picking
- D : Part panting

**Q.no 59. The Signals which represent raw data or domain conversions are referred as**

- A : Relational maps
- B : Sensorial maps
- C : Perceptul maps
- D : Geomatic Maps

**Q.no 60. A Kalman filter is useful in**

- A : Merging position
- B : Merging pose estimate
- C : Merging path
- D : Merging revoking

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**Answer for Question No 1. is a**

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**Answer for Question No 2. is a**

---

**Answer for Question No 3. is b**

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**Answer for Question No 4. is b**

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**Answer for Question No 5. is a**

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**Answer for Question No 6. is c**

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**Answer for Question No 7. is b**

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**Answer for Question No 8. is d**

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**Answer for Question No 9. is a**

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**Answer for Question No 10. is a**

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**Answer for Question No 11. is a**

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**Answer for Question No 12. is b**

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**Answer for Question No 13. is b**

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**Answer for Question No 14. is a**

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**Answer for Question No 15. is c**

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**Answer for Question No 16. is c**

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**Answer for Question No 17. is d**

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**Answer for Question No 18. is b**

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**Answer for Question No 19. is d**

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**Answer for Question No 20. is c**

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**Answer for Question No 21. is a**

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**Answer for Question No 22. is c**

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**Answer for Question No 23. is d**

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**Answer for Question No 24. is a**

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**Answer for Question No 25. is a**

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**Answer for Question No 26. is a**

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**Answer for Question No 27. is a**

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**Answer for Question No 28. is a**

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**Answer for Question No 29. is a**

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**Answer for Question No 30. is d**

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**Answer for Question No 31. is c**

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**Answer for Question No 32. is b**

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**Answer for Question No 33. is d**

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**Answer for Question No 34. is b**

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**Answer for Question No 35. is b**

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**Answer for Question No 36. is d**

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**Answer for Question No 37. is a**

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**Answer for Question No 38. is a**

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**Answer for Question No 39. is a**

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**Answer for Question No 40. is b**

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**Answer for Question No 41. is a**

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**Answer for Question No 42. is c**

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**Answer for Question No 43. is a**

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**Answer for Question No 44. is d**

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**Answer for Question No 45. is c**

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**Answer for Question No 46. is a**

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**Answer for Question No 47. is a**

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**Answer for Question No 48. is a**

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**Answer for Question No 49. is a**

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**Answer for Question No 50. is c**

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**Answer for Question No 51. is d**

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**Answer for Question No 52. is c**

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**Answer for Question No 53. is b**

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**Answer for Question No 54. is c**

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**Answer for Question No 55. is a**

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**Answer for Question No 56. is d**

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**Answer for Question No 57. is c**

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**Answer for Question No 58. is b**

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**Answer for Question No 59. is b**

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**Answer for Question No 60. is b**

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