



# CBCS SCHEME

BMT358D

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Question Paper Version : A

**Third Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025**  
**Robotics Eco-System**

Time: 1 hr.]

[Max. Marks: 50

## INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

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1. Robot is derived from Czech word  
a) Rabota                      b) Robota                      c) Rebotas                      d) Ribota
  2. A Robot is a  
a) Programmable  
b) Multifunctional Manipulator  
c) Both A and B  
d) None of these
  3. The main objectives of industrial robot is to  
a) To minimize the labour requirement  
b) To increase productivity  
c) To enhance the life of production machine  
d) All of these
  4. What do industrial robots look like  
a) Humanoid with legs and arms  
b) A small vacuum cleaner  
c) A multi jointed arm with a fixed base  
d) A soft furry pet
  5. Which engineering field would specialize in an understanding a robotic motion.  
a) Electrical Engineering                      b) Mechanical Engineering  
c) Industrial Engineering                      d) Civil Engineering
  6. Which of the following work is done by general purpose robot  
a) Part picking                      b) Welding                      c) Spray painting                      d) All of these

7. The robot designed with Costesian coordinate system has
  - a) Three linear movement
  - b) Three rotational movement
  - c) Two linear and one rotational movement
  - d) Two rotational and one linear movement
8. Which engineering field would specialize in an understanding of robotic control systems?
  - a) Electrical Engineering
  - b) Mechanical Engineering
  - c) Industrial Engineering
  - d) Civil Engineering
9. The capacity of robot to carry load is known as
  - a) Load carrying capacity
  - b) Work envelope
  - c) Maximum reach
  - d) None of these
10. The number of moveable joints in the base, the arm, and the end effectors of the robot determines
  - a) Payload capacity
  - b) Operational limits
  - c) Flexibility
  - d) degree of freedom
11. Which of the following terms refers to the rotational motion of a robot arm
  - a) Swivel
  - b) Axle
  - c) Retrograde
  - d) Roll
12. What is the name for information sent from robot sensors to robot controllers
  - a) Temperature
  - b) Pressure
  - c) Feedback
  - d) Signal
13. \_\_\_\_\_ is up and down motion of wrist
  - a) Pitch
  - b) Yaw
  - c) Roll
  - d) None of these
14. Ability to position back to a point that was previously taught
  - a) Accuracy
  - b) Precision
  - c) Spatial resolution
  - d) Repeatability
15. Polar Configuration Robot Notation
  - a) TRL
  - b) TTL
  - c) TRR
  - d) TVL
16. Jointed arm configuration robot notation
  - a) TRL
  - b) TTL
  - c) TRR
  - d) TVL
17. What is the notation of roll, pitch and yaw
  - a) RRL
  - b) TVL
  - c) TRR
  - d) RRT
18. Who is the largest robot manufacture
  - a) ABB
  - b) Kawasaki
  - c) Fanuc
  - d) Boston Dynamics
19. What is the rule of robotics
  - a) Obey the human being
  - b) Do not harm human being
  - c) Protects itself from harm
  - d) All of these
20. Which of the following is the most common source of power for a student robot
  - a) Alternating current
  - b) Batteries
  - c) Pneumatics
  - d) Hydraulics
21. A control system in which the control action is somehow dependent on the output is known as
  - a) Closed loop system
  - b) Semi closed loop system
  - c) Open system
  - d) None of these

22. In closed loop control system, with positive value of feedback gain the overall gain of the system will  
 a) Decrease                      b) Increase                      c) Be unaffected                      d) Any of these
23. Which of the following is an open loop control system  
 a) Field controlled DC motor                      b) Ward Leonard control  
 c) Metadyne                      d) Stroboscope
24. A good control system has all the following features except  
 a) Good stability                      b) Slow response  
 c) Good accuracy                      d) Sufficient power handling capacity
25. The initial response when the output is not equal to input is call  
 a) Transient response                      b) Error response  
 c) Dynamics response                      d) Either of these
26. A closed loop system is distinguished from open loop system by which of the following  
 a) Servomechanism                      b) Feedback  
 c) Output pattern                      d) Input pattern
27. Traffic light system is the example of  
 a) Open loop system                      b) Closed loop system  
 c) Both (a) and (b)                      d) None of these
28. The end effectors of a robot  
 a) Can be an actual tool                      b) is the robot hand  
 c) May have a gripper action                      d) All of these
29. Grippers are used to  
 a) Hold the object                      b) Sense the object  
 c) Move the object                      d) Both (a) and (c)
30. The basic components of hydraulic fluid power system  
 a) Reservoir  
 b) Pump and lines  
 c) Actuating devices and control valves  
 d) All of these
31. What sensors do under water robot use  
 a) Underwater acoustic sensor                      b) Pressure sensor  
 c) Force sensor                      d) Temperate sensor
32. How deep can underwater robots can go  
 a) 4500 mts                      b) 3000 mts                      c) 150 mts                      d) 4000 mts
33. What are the types of house hold robots?  
 a) Grill Bot                      b) Yarbo  
 c) Gold well Gold well Gecko robot                      d) All of these
34. Touch screen of mobile phone uses  
 a) AFR sensors                      b) Pellistor                      c) Viscometer                      d) None of these
35. Inductive proximity sensors can be effective only when the objects are of \_\_\_\_\_ materials  
 a) Ferro magnetic                      b) Diamagnetic                      c) Paramagnetic                      d) All of these

36. Sensor based servoing associated with  
 a) Robot pose                      b) Robot action                      c) Robot position                      d) Robot path
37. Which is fundamental approach of mapping  
 a) Mapping without localization                      b) Sensorial maps  
 c) Perceptual maps                      d) Geometric maps
38. Which localization does not require any previous information  
 a) Absolute                      b) Local                      c) Global                      d) Passive
39. The following are the application of robotics  
 a) Pick and place                      b) Welding                      c) Material transfer                      d) All of these
40. Proximity sensors used for  
 a) Distance measurement                      b) Pick and place  
 c) Range transformation                      d) None of these
41. Which of the following sensor work based on radio detection and ranging  
 a) Sonar                      b) Radar                      c) Inertial                      d) Biosensor
42. Which of the following is the composed of machine that irresponsible for controlling a mechanism system  
 a) Sensor                      b) Middle ware  
 c) Actuator                      d) Transducer
43. What is reckoning  
 a) Evaluating existing location                      b) Evaluating previous location  
 c) Information acquired                      d) Finding the location
44. One of the three is not a type of robot  
 a) Medical                      b) Industrial                      c) Household                      d) None of these
45. Triangulation is a technique associate with  
 a) Pose                      b) Landmark classes  
 c) Robot                      d) Odometry
46. Which sensor can detect nearby objects  
 a) Proximity sensors                      b) Humidity sensors                      c) Touch sensor                      d) Pressure sensor
47. What is the sensing range for capacitive proximity sensor  
 a) 150 mm                      b) 25 mm                      c) 120 mm                      d) 100 mm
48. Other name for tactile sensor is  
 a) Pressure sensor                      b) Humidity sensor                      c) Touch sensor                      d) Temperature sensor
49. How many types of touch sensor are present  
 a) 2 types                      b) 3 types                      c) 4 types                      d) 5 types
50. Which sensor is used in mobile phone  
 a) Capacity touch sensor                      b) Temperature sensor  
 c) Humidity sensor                      d) Weight sensor

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