

Takyon System Solutions Pvt Ltd

STOGOSUITE IT

TERM 1 ASSESSMENT

AI & ROBOTICS (Grades 7 to 9)

Name of the Student:

Name of the School :

Class:

Date :

Instructions:

- This is a multiple-choice question (MCQ) assessment.
 - Each question carries 1 mark.
 - Choose the correct answer by marking a tick (✓) on the appropriate option.
 - Total Marks: **30**
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Section A: MCQs (30 Marks)

1. Which component of a robot is responsible for decision-making?

- Actuator
- Sensor
- Control System
- Motor

2. What is the purpose of machine vision in robotics?

- To enable robots to hear sounds
- To allow robots to interpret and process images
- To store data
- To move objects

3. Which AI technology helps machines understand human speech?

- Computer Vision
- Natural Language Processing
- Machine Learning
- Neural Networks

4. What is the function of a robotic gripper?

- To power the robot
- To process data
- To manipulate objects
- To provide navigation

5. What is supervised learning in AI?

- Learning without any labeled data
- Learning with examples provided
- Learning through trial and error
- Learning from other robots

6. Which sensor is used to detect obstacles in a robot's path?

- Temperature Sensor
- Ultrasonic Sensor
- Pressure Sensor
- Light Sensor

7. What is the main role of an algorithm in AI?

- To store information
- To define a step-by-step process for problem-solving
- To provide energy to machines
- To connect devices

8. Which of these is an example of unsupervised learning?

- Clustering similar items together
- Training a model to predict outcomes
- Teaching a robot to navigate a maze
- Sorting fruits by size using labeled data

9. What is the role of ethics in AI?

- To make robots faster
- To ensure AI is used responsibly
- To stop AI development
- To replace human workers

10. Which robot is commonly used for space exploration?

- Industrial Robot
- Humanoid Robot
- Rover
- Drone

11. What is reinforcement learning?

- Learning from labeled data
- Learning by receiving rewards and penalties
- Learning by copying human behavior
- Learning without any interaction

12. What is the advantage of collaborative robots (cobots)?

- They work independently of humans
- They are designed to work alongside humans
- They are only used in factories
- They do not require programming

13. Which material is often used to create lightweight robot arms?

- Steel
- Aluminium
- Plastic
- Wood

14. What is the function of a feedback loop in a robot?

- To collect data
- To improve task accuracy based on performance
- To power the robot
- To store energy

15. Which type of AI mimics human brain structure?

- Neural Networks
- Rule-Based Systems
- Expert Systems
- Symbolic AI

16. Which part of a robot enables mobility?

- Sensor
- Actuator
- Camera
- Processor

17. Which industry uses robots for assembling products?

- Education
- Automotive
- Agriculture
- Healthcare

18. What is a drone equipped with cameras primarily used for?

- Medical surgery
- Aerial surveillance
- Manufacturing
- Teaching

19. What is a chatbot?

- A robot that walks like a human
- An AI-based system for text and voice interactions
- A machine used in agriculture
- A tool for cleaning surfaces

20. What is computer vision?

- AI understanding and interpreting visual data
- Robots moving objects
- Creating 3D models
- Translating languages

21. Which technology helps robots perform repetitive tasks efficiently?

- Automation
- Networking
- Cloud Computing
- Machine Translation

22. What is the purpose of a gyroscope in a robot?

- To detect sound
- To balance the robot
- To generate power
- To process instructions

23. What is the primary use of robotic arms in manufacturing?

- Painting
- Welding
- Assembly
- All of the above

24. What is swarm robotics?

- Using one large robot for a task
- Coordinating multiple small robots to work together
- Robots designed for underwater exploration
- Robots built for construction

25. Which of the following is a real-world AI application?

- Voice assistants
- Smart home devices
- Autonomous vehicles
- All of the above

26. What is the goal of AI in healthcare?

- To replace doctors
- To improve diagnosis and treatment
- To make medicine cheaper
- To create robotic nurses

27. What is a robotic end-effector?

- The base of the robot
- The tool attached to a robotic arm
- The power supply
- The control system

28. What type of AI is capable of learning from large datasets?

- Machine Learning
- Symbolic AI
- Cloud AI
- None of the above

29. What is the purpose of a LiDAR sensor in robots?

- To detect temperature changes
- To measure distance using laser technology
- To identify colors
- To capture images

30. Which AI technology can predict outcomes based on past data?

- Predictive Analytics
- Computer Vision
- Natural Language Processing
- Neural Networks