

# CBCS SCHEME

21MR581

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Question Paper Version : A

## Fifth Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024 Introduction to AI/ML

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. What is artificial intelligence  
a) The ability of humans to learn and adopt  
b) The intelligence demon stated by animals  
c) The ability of machines to mimic human cognitive functions  
d) A computer software
  2. AI mimics :  
a) Human emotions      b) Human actions      c) Human thinking      d) Human appearance
  3. AI aims to :  
a) Replace humans      b) Solve problems      c) look human      d) Connect computers
  4. "AI" was first used in  
a) 1950      b) 1955      c) 1960      d) 1969
  5. Father of AI is :  
a) Alan Turing      b) John McCarthy      c) Marvin Minsky      d) All of them
  6. What is an intelligent agent  
a) A complex program  
b) A physical machine  
c) Program that perceives and acts  
d) Neural Network
  7. What is not an agent :  
a) Chess program      b) Self driving car      c) Virtual assistant      d) Calaclator

8. What is the Turing test used for :  
 a) Machine speed  
 b) Machine intelligence  
 c) Algorithm comparison  
 d) Future prediction
9. AI risks include  
 a) AI is good  
 b) Job losses  
 c) Algorithmic biases  
 d) All of these
10. The major benefit of AI is :  
 a) Entertainment  
 b) Complex problem solving  
 c) Task automation  
 d) All of these
11. Problem solving agents use \_\_\_\_\_ to find solutions  
 a) Emotions  
 b) Search techniques  
 c) Intuition  
 d) Magic
12. Uninformed search strategies explore the state space :  
 a) Randomly  
 b) Without extra knowledge  
 c) Using past experiences  
 d) Based on problem difficulty
13. Breadth-First Search (BFS) expands states.  
 a) Deepest first  
 b) level-by-level  
 c) Closest to goal first  
 d) Based on estimated cost
14. Depth-First Search (DFS) can get stuck in :  
 a) Wide open spaces  
 b) Deep, Narrow paths  
 c) Time travel paradoxes  
 d) Lack of motivation
15. Informed search uses \_\_\_\_\_ to guide exploration  
 a) Heuristics  
 b) Heuristics  
 c) Pure luck  
 d) Google maps
16. A good heuristic estimates?  
 a) Past performance  
 b) Distance to goal  
 c) Weather forecast  
 d) Your favorite color
17. A Search combines \_\_\_\_\_  
 a) BFS + informed cost estimate  
 b) Magic spells  
 c) Teleportation  
 d) Psychic abilities
18. Hill climbing can get stuck at \_\_\_\_\_  
 a) Mountain peaks  
 b) Local Maxima  
 c) Valleys of despair  
 d) Philosophical questions
19. Genetic algorithms Mimic \_\_\_\_\_  
 a) Animal instincts  
 b) Natural selection  
 c) Super powers  
 d) Stock market trends
20. Simulated Annealing allows escaping \_\_\_\_\_  
 a) Block holes  
 b) Local optima, sometimes  
 c) The friend zone  
 d) Reality TV shows
21. Machine learning addresses problems that are \_\_\_\_\_  
 a) Static  
 b) Dynamic  
 c) Simple  
 d) Obsolete
22. In supervised learning, the algorithm learns from \_\_\_\_\_  
 a) Unlabeled data  
 b) Labeled data  
 c) Noisy data  
 d) Historical data
23. Machine learning intersects with which field for natural language processing  
 a) Biology  
 b) Linguistics  
 c) Geology  
 d) Astronomy





39. Type 1 error occurs when we :  
 a) Reject a true null hypothesis  
 b) Fail to reject  
 c) Accept a false active hypothesis  
 d) Accept true null hypothesis
40. The process of adjusting a model to fit the training data is known as \_\_\_\_\_  
 a) Generalization      b) overfitting      c) underfitting      d) learning
41. An Artificial Neural Networks (ANN) is inspired by the function of the \_\_\_\_\_  
 a) Micro processor      b) Human brain      c) Solar system      d) DNA molecules
42. The basic building blocks of the Nervous system are called \_\_\_\_\_  
 a) Nodes      b) Neurons      c) Synapses      d) Axons
43. In an artificial neuron, the weighted sum of inputs is passed through a \_\_\_\_\_  
 a) Sigmoid function      b) Linear function      c) Step function      d) Exponential function
44. The perception is a type of Neural network used for \_\_\_\_\_  
 a) Image recognition      b) Regression analysis  
 c) Binary classification      d) NLP
45. Recurrent Neural Networks (RNNs) are known for  
 a) Feed forward connections  
 b) Feedback connections  
 c) Unsupervised learning  
 d) Reinforcement learning
46. ANNs are composed of layers, including the input layer, hidden layers, and the :  
 a) Processing layer      b) Output layer      c) Memory layer      d) Control layer
47. Neurons communicate with each other through \_\_\_\_\_  
 a) Chemical Signals      b) Electrical signals      c) Magnetic signals      d) Infrared signals
48. The activation in an artificial Neuron introduces  
 a) Non-Linearly      b) Linearity      c) Randomness      d) Stabilization
49. Perceptions are limited to solving problems that are  
 a) Linearly separable      b) Non-linearly separable  
 c) Quadratically separable      d) Categorically separable
50. Convolutional Neural networks are used for \_\_\_\_\_  
 a) Text analysis      b) Image recognition  
 c) Financial modelling      d) Speech synthesis.

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