



Max. Duration: 1.5 hrs

Max. Marks: 30

SECTION - A

A. Objective Type Questions (ALL QUESTIONS ARE COMPULSORY)

(5X1 = 05)

- a) Which approach involves simulating the human brain's decision-making process?
- Rational agent approach
 - Law of thoughts approach
 - Machine learning approach
 - Cognitive modelling approach
- b) Which level of detail is critical for successfully modelling human intelligence in AI?
- Low-level hardware implementation
 - Precise replication of every neural connection in the human brain
 - High-level abstract reasoning
 - Simplified statistical models of human cognition
- c) Deep learning is most commonly associated with which type of model?
- Decision trees
 - Neural networks with multiple layers
 - Rule-based systems
 - Genetic algorithms
- d) Which breakthrough model significantly advanced NLP research?
- Res Net
 - GPT (Generative Pre-trained Transformer)
 - Q-learning
 - YOLO (You Only Look Once)
- e) Which referencing tool allows you to organize references and generate citations in multiple formats?
- Mendeley
 - Pro Writing Aid
 - StyleWriter
 - White Smoke

SECTION – B

B. Short Answer Type Questions (Attempt any THREE)

(3X5 =15)

1. Describe the role of AI in optimizing traffic management systems.
2. Explain an Ant colony optimization technique.
3. Discuss a recent breakthrough in computer vision research.
4. Elaborate the role of IoT in smart city development.
5. Explain how LaTeX is beneficial for creating technical documents, such as research papers or theses.

SECTION – C

C. Long Answer Type Questions (Attempt any ONE)

(1X10=10)

1. How is AI helping low-resource communities in addressing healthcare and education challenges?
2. What advancements in neuromorphic computing aim to improve the efficiency of ANNs?