

Seat No.: _____

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SARDAR PATEL UNIVERSITY
B. C. A (NEP) (Semester 5) Examination - 2025
US05SEBCA08: Introduction to Artificial Intelligence



Date: 9th October 2025, Thursday

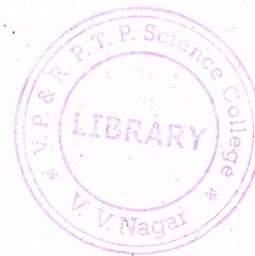
Time: 10:00 AM to 11:30 AM

Total: 25 Marks

Q-1 MCQs

[05]

1. Who is known as the Father of Artificial Intelligence?
A. Alan Turing
B. John McCarthy
C. Warren McCulloch
D. Marvin Minsky
2. What is the main component used for reasoning in an Expert System?
A. Sensor engine
B. Knowledge base
C. Inference engine
D. Storage unit
3. Which data structure is used in Depth-First Search (DFS)?
A. Stack
B. Priority Queue
C. Queue (FIFO)
D. Tree
4. Which KBS component explains how a decision was made?
A. Knowledge Base
B. User Interface
C. Knowledge Acquisition Module
D. Explanation Module
5. Which structure is commonly used in semantic networks?
A. Trees
B. Linked Lists
C. Arrays
D. Graphs



Q-2 What is blind search? Explain Breadth-First Search and Depth-First Search.

[10]

OR

Q-2 What is AI? What are the main areas of its application?

[10]

Q-3 What is a Knowledge-Based System (KBS)? Describe the main components of KBS.

[10]

OR

Q-3 How are Knowledge Acquisition and Knowledge Update performed in a Knowledge-Based System (KBS)?

[10]

(2)