RAN-5842

M. C. A. (Sem. V) Examination

March / April - 2019

Paper - 502: Artificial Intelligence and Knowledge Based System

Time: 3 Hours]   **[Total Marks: 70**

સૂચના : / Instructions

Q.l (a) Define term "Artificial Intelligence'. Also explain Al problem domain of 'Routine tasks'. **[6]**

OR

(a) Explain "intelligence' Also explain characteristics of knowledge.

(b) Define state space. What is importance of state space in solving an AI problem? **[5]**

(c) Define knowledge manipulation. **[3]**

Q.2 (a) What is knowledge organization? What are various issues in organizing knowledge for solving problem? **[6]**

(b) Explain semantic rules for proposition logic. **[5]**

(c) Explain ANY ONE **[3]**

1. Formal System

2. Complete System

Q.3 (a) Explain need of Structured Knowledge Representation methods **[3]**

(b) Explain Conceptual Graph using an appropriate example. **[7]**

OR

(b) Using an appropriate example explain script structure.

(c) Explain various actions which can be used in conceptual dependency. **[4]**

Q.4(a) Define heuristic information. Also explain means-end analysis. **[5]**

(b) Explain ANY ONE searching method **[5]**

1. Bidirectional Search

2. Branch and bound search

(c) Explain plateau and foot-hill situation in searching. **[4]**

Q.5 (a) Define knowledge acquisition and also state purpose of it. **[5]**

(b) Explain life cycle of an expert system. **[5]**

(c) Write note on ANY ONE **[4]**

1. Learning methods

2. Characteristics of an expert system

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