

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
III B.TECH II SEM–REGULAR/SUPPLEMENTARY EXAMINATIONS MAY - 2010
ARTIFICIAL INTELLIGENCE AND NEURAL NETWORKS
(COMPUTER SCIENCE & ENGINEERING)

Time: 3hours

Max.Marks:80

Answer any FIVE questions
All questions carry equal marks

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1. a) Define intelligence, artificial intelligence, agent.
 b) Briefly discuss the structure of agents.
 c) Explain simple reflex agent in detail. [4+4+8]

2. a) Explain Breadth first search strategy. Discuss time and memory requirements.
 b) How to measure problem-solving performance? Explain. [8+8]

3. a) Explain forward and backward chaining in propositional logic.
 b) Consider the following axioms:

$$P$$

$$(P \times Q) \rightarrow R$$

$$(SVT) \rightarrow Q$$

$$T$$
 Prove R using resolution in propositional logic. [8+8]

4. a) Explain propositional vs. first order inference.
 b) How resolution be used to show that a sentence is
 i) Valid.
 ii) Unsatisfiable. [8+8]

5. Draw and explain in detail the block diagram of nervous system. [16]

6. Give the analysis of pattern storage networks. [16]

7. Explain the following capabilities of neural networks.
 a) Non-linearity.
 b) Input-output mapping.
 c) Adaptability.
 d) Evidential response. [16]

8. Explain about associative memory networks in detail. [16]
