

TIT-502

1012

Printed Pages : 4

Paper Code & Roll No. to be filled in your Answer Book

Roll No.

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B. Tech. III Year (V Sem.)

Odd Semester Examination-2015

ARTIFICIAL INTELLIGENCE*Time : 3 Hours]**[Maximum Marks :100***Answer Any Four (4×5=20)**

1. What is artificial intelligence? Also define artificial technique.
2. What about other comparisons between human and computer intelligence? Does AI aim to put the human mind into the computer?
3. Why would evolution tend to result in systems that act rationally?
4. Explain why problem formulation must follow goal formulation.
5. Write a note on the foundations of artificial intelligence.

Answer Any Four (4×5=20)

1. What are the different parameters are used to evaluate a search technique.

2. Differentiate between supervised and unsupervised learning techniques.
3. Define the terms - natural intelligence and artificial intelligence. How do you differentiate between the two?
4. What is natural language processing?
5. Define and differentiate between weak and strong AI.

Answer Any Two (2x10=20)

1. Show that the depth first search technique is neither complete nor optimal.
2. Explain the effect of over-estimation and underestimation on A* algorithm.
3. What is Bayesian reasoning? What does a Bayesian network represent? Explain.

Answer Any Two (2x10=20)

1. What is machine learning? Differentiate between supervised, unsupervised and reinforcement learning.
2. Explain the expectation and maximization (EM) algorithm for finding the maximum likelihood with hidden variables.

3. To which category of clustering schemes does the k-means algorithm belong? What is its major advantage? Which are the factors that influence the computation duration of this algorithm?

Answer Any Two (2×10=20)

1. Write short notes on the following:
 - a. Ant colony system
 - b. Knowledge acquisition
2. Discuss syntactic and semantic ambiguity? Explain in detail the structure of different intelligent agent.
3. Differentiate between forward chaining and backward chaining?

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