PAPER ID-410291

Roll No: | | | | | | | | | | | | | |

B.TECH
(SEM VII) THEORY EXAMINATION 2021-22
ARTIFICIAL INTELLIGENCE

Time: 3 Hours *Total Marks: 100*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a. n?

b. :e.

c. What do you understand by feature extraction?

d. What are the different properties of a task environment?

e. Describe the First-order logic model.

f. Describe resolution in brief.

g. What is LISP? Why it is so popular in AI.

h. What is the role of intelligent agent?

i. What is the need of classification techniques in pattern recognition?

j. Differentiate supervised and unsupervised learning.

SECTION B

2. Attempt any *three* of the following: 10 x 3 = 30

a. What is meant by the term Artificial Intelligence? How it is difficult from natural intelligence?

b. Discuss Branch-and-bound search algorithm.

c. What is the difference between knowledge representation and knowledge acquisition?

d. Explain clustering and differentiate between supervised and unsupervised learning.

e. Describe the N-queens problem in detail. Also explain with an example.

SECTION C

3. Attempt any *one* part of the following: 10 x 1 = 10

(a) What do you understand by natural language processing?

(b) Explain the concept of alpha-beta pruning. write alpha-beta search algorithm.

4. Attempt any *one* part of the following: 10 x 1 = 10

(a) Differentiate between local search and global search.

(b) Discuss simulated annealing search algorithm with its advantages nd disadvantages.

5. Attempt any *one* part of the following: 10 x 1 = 10

(a) Define forward chaining and backward chaining with examples.

(b) Discuss various application domains of machine learning.

6. Attempt any *one* part of the following: 10 x 1 = 10

(a) Write short notes on support vector machine.

(b) What is pattern recognition? Explain various steps involved in the designing of a pattern recognition system with the help of a diagram.

7. Attempt any *one* part of the following: 10 x 1 = 10

(a) Write short notes on Bayesian classifier.

(b) Write short notes on LDA and PCA

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