PAPER ID-311642

Subject Code: KCA301

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

MCA
(SEM III) THEORY EXAMINATION 2023-24
ARTIFICIAL INTELLIGENCE

TIME: 3HRS **M.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**

Q no.	Question
a.	What do you mean by AI?
b.	What are the different branches of artificial intelligence?
c.	Discuss searching process.
d.	Define conceptual dependency.
e.	Explain Bayesian networks.
f.	Describe forward chaining.
g.	What is Statistical learning method?
h.	Describe decision tree with diagram?
i.	What is Statistical PR?
j.	Explain K-means clustering.

SECTION B

2. Attempt any *three* of the following: **10x3=30**

a.	Describe the applications of artificial intelligence.
b.	Explain Searching techniques used in games.
c.	Describe the use of Hidden Markov models in speech recognition.
d.	Explain learning with hidden data – EM algorithm.
e.	Define pattern recognition. What are the components of pattern recognition?

SECTION C

3. Attempt any *one* part of the following: **10x1=10**

a.	Explain various approaches in NLP?
b.	Differentiate between human intelligence and machine intelligence.

4. Attempt any *one* part of the following: **10x1=10**

a.	Discuss the problem of water jug with heuristic search techniques.
b.	Explain Alpha-Beta pruning with example.

5. Attempt any *one* part of the following: **10x1=10**

a.	What do you mean by knowledge representation? Describe the techniques of knowledge representation.
b.	Explain the methods of planning & acting in the real world.

6. Attempt any *one* part of the following: **10x1=10**

a.	Write short note on the following: i) Reinforcement learning ii) Machine learning.
b.	Explain discrete model, Naive Bayes Model & Continuous Model.

7. Attempt any *one* part of the following: **10x1=10**

a.	Define Principle Component Analysis (PCA). Write steps involved in making principle components to do a classification of given data.
b.	Explain Nearest Neighbor (NN) rule in detail.

QP24DP2_290 | 20-03-2024 13:29:18 | 117.55.242.132

QP24DP2_290 | 20-03-2024 13:29:18 | 117.55.242.132