Code No: F-13552/N/AICTE

FACULTY OF ENGINEERING

B.E. (ECE) VII - Semester (AICTE) (Main) (New) Examination, February/ March 2024

Subject: Fundamentals of AIML (P.E-III)

Time: 3 Hours

Max. Marks: 70

Note: (i) First question is compulsory and answer any four questions from the remaining six questions. Each questions carries 14 Marks.

(ii) Answer to each question must be written at one place only and in the same order as they occur in the question paper.

(iii) Missing data, if any, may be suitably assumed.

1. a) Define artificial intelligence.
   b) What are the problems solved by artificial intelligence?
   c) Write short note on semantic networks.
   d) What is predicate logic?
   e) Why Machine Learning is Important?
   f) Define Eigen vectors.
   g) Explain alpha-beta pruning.

2. a) Explain A* algorithm with an example.
   b) What are the advantages and disadvantages of artificial intelligence?

3. a) Differentiate between forward reasoning & backward reasoning.
   b) What are various approaches in Knowledge representation?

4. a) Explain Bayesian Network with an example.
   b) Discuss briefly about Machine Learning

5. a) What is Linear Regression in Machine Learning?
   b) Explain Decision Tree algorithm with an example

6. a) Discuss in detail about Principal Component Analysis.
   b) Explain hierarchical clustering algorithm in detail.

7. a) Explain K-means Clustering algorithm.
   b) Discuss Min-Max Search.

**