2124

M.E. Electrical Engineering (Power System)
First Semester
EE(PS)-8103: Artificial Intelligence Techniques for Power System Optimization

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt _any five_ questions. All questions carry 10 marks.

x-x-x

1. Define Artificial Intelligence. Discuss various problem-solving methods used in AI, providing relevant examples.

2. Explain different searching techniques in AI, comparing their efficiency and applications.

3. Discuss the role of knowledge representation in AI. What are some common methods used to represent knowledge?

4. Describe predicate logic and its importance in AI for reasoning. Provide examples of how it is applied.

5. Explain the concepts of fuzzy logic, including fuzzy relations and membership functions. How are these used in AI?

6. Outline the Backpropagation algorithm in Artificial Neural Networks. Why is it significant for model training?

7. Define genetic algorithms. Discuss their importance within Evolutionary Techniques, giving an example.

8. Describe the application of AI in load forecasting and load flow studies. How does AI enhance accuracy in these fields?

x-x-x