

Mid-West University
Examinations Management Office

Semester End Examination 2081

Bachelor level/ B. Sc. (CSIT)/ 5th Semester

Time: 3 hours

Subject: Artificial intelligence (COM451)

Full Marks: 60

Pass Marks: 30

Candidates are required to give their answers in their own words as far as practicable. Figures in the margins indicate marks.

Group A

Very short answer questions (attempt *all*).

[8x2 = 16]

1. State different definitions of A.I.
2. Describe alpha beta procedure.
3. Differentiate Syntax and Semantics in Proposition Logic.
4. How can you define min max algorithm?
5. What do you mean by Conjunctive Normal Form (CNF)?
6. Explain learning by training perceptions.
7. What do you mean by Goal Based Agent?
8. Define Constraint Satisfaction Problem.

Group B

Short answer questions (attempt *any five*).

[5x4 = 20]

9. Define Agent. Explain its key Components.
10. What do you mean by PEAS? Write the PEAS description for Driverless Car.
11. Explain rule based deduction system.
12. What do you mean by Problem Solving in AI? What are the general steps in problem solving?
13. Explain Bidirectional Search with suitable example.
14. Describe Expert System. Also illustrate the fundamental characteristics of Expert system.

Group C

Long answer questions (attempt *any three*).

[3x8 = 24]

15. What is Natural Language Processing? Explain the steps in NLP.
16. Differentiate between informed and uninformed search technique. Explain A* Search Algorithm with Suitable Diagram.
17. Define Production System. Describe the components of Production System.
18. Describe Artificial Neural Network. Differentiate between Artificial Neural Network and Biological Neural Network.

The End