

Roll No.

249407

May, 2019
MBA (ITM) - IV SEMESTER
ARTIFICIAL INTELLIGENCE (MBA/ITM 215)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) What is the criteria to check the success of a machine? (1.5)
- (b) What is problem reduction in AI. (1.5)
- (c) Write the predicate for the following :
 - (i) Every mother loves a child (1.5)
- (d) Represent the knowledge about
 - (i) Wooden Chair using semantic net. (1.5)
- (e) Define Hypothesis, Belief, Knowledge, Intelligence with Example? (1.5)

- (f) What do you mean by state space searching? How heuristic search is different from blind search? How heuristic function can be designed? (1.5)
- (g) Explain Symbolic reasoning under Uncertainty. (1.5)
- (h) What are advantages of FOPL over PL? (1.5)
- (i) What is Conceptual Dependency? (1.5)
- (j) Represent the following information using Thematic Role Frame.
 - (i) Ram will read the book at 10.00 A.M. (1.5)

PART-B

- 2. (a) Define Artificial Intelligence. Write application areas of Artificial Intelligence System. (5)
- (b) What is the difference b/w Depth First Search and Breadth First Search? Why BFS is preferred over DFS. Also explain their time and Space complexities. (10)
- 3. (a) What is problem state space? Solve water jug problem. (5)
- (b) Explain Means End Analysis algorithm in detail with example. (10)
- 4. What is Constraint Satisfaction Problem? Solve the following problem : (15)
 - SEND
 - +MORE
 - MONEY

- 5. (a) What is Neural Network? What is the purpose of NN in AI. Explain the architecture in detail. (10)
- (b) Explain the concept of Learning by Analogy in detail? (5)
- 6. (a) Explain Expert System Development life cycle in detail. (10)
- (b) What is NLP? Also explain transformational grammar? (5)
- 7. What are the various knowledge representation schemes in AI. Explain how frame can be used to represent knowledge in AI. Draw the frame to represent the information about natural disaster. (15)