

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean
2015

Full Marks: 40
Time: 2 hrs

BIM / Fifth Semester / ITC 223: Artificial Intelligence

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

Brief Answer Questions:

[10 × 1 = 10]

1. What is Artificial Intelligence?
2. Define omniscience.
3. How is performance of search algorithm measured?
4. What is cryptarithmic?
5. What is the limitation of propositional logic over predicate logic?
6. State Modus Ponens inference rule with suitable example.
7. Define conjunctive normal form with suitable example.
8. Define mutation in genetic algorithm.
9. Define rule based expert system.
10. What is meant by machine translation in NLP?

Group "B"

Short Answer Questions:

[5 × 3 = 15]

11. Make a comparison between breadth first search and depth first search.
12. List operators used in propositional logic and explain any two of them with example.
13. Differentiate between universal and existential quantifiers.
14. Explain the different components of an expert system.
15. What is meant by Natural Language processing? Parse the sentence "He hit the man with the hammer" using top down parsing.

Group "C"

Long Answer Questions:

[3 × 5 = 15]

16. Define agent. Explain any three types of environment for an agent.
17. Define Mini Max Search procedure with suitable example.
18. What is activation function in neural network? Explain different types of activation functions.

