



CBCS SCHEME

16/17MCA543

Fifth Semester MCA Degree Examination, June/July 2019 Artificial Intelligence

Time: 3 hrs.

Max. Marks: 80

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Define AI. Discuss various properties that knowledge processes. (08 Marks)
b. Define the following: i) State space search ii) production rules. (08 Marks)

OR

- 2 a. What is production system? Explain its components. (08 Marks)
b. Explain advantages of i) DFS and ii) BFS. (08 Marks)

Module-2

- 3 a. Discuss Generate and Test search. (04 Marks)
b. Explain steepest Ascent Hill climbing algorithm. (08 Marks)
c. Define local maxima, plate ace and ridge. (04 Marks)

OR

- 4 a. Define Facts and Representation. With a neat diagram explain mapping between them. (08 Marks)
b. With an example discuss Inheritable knowledge. (08 Marks)

Module-3

- 5 a. Convert the following sentences into FOPL
i) Marcus was a man
ii) All Pompeian's were Romans
iii) All Romans were either loyal to Caesar or hated him.
iv) Everyone is loyal to someone. (08 Marks)
b. Explain resolution in propositional logic with an algorithm. (08 Marks)

OR

- 6 a. Explain various issues when dealing with non-monotonic logic. (08 Marks)
b. With an example discuss default logic. (08 Marks)

Module-4

- 7 a. Write a note on statistical Reasoning. (08 Marks)
b. With an example explain Bayesian network. (08 Marks)

OR

- 8 a. Explain Fuzzy logic and its applications. (08 Marks)
b. Discuss Rule based systems. (08 Marks)

Module-5

- 9 a. Define semantic network and explain how nonbinary predicates are represented. (08 Marks)
b. What are frames? Give various slots and filters for a frame 'Book'. (08 Marks)

OR

- 10 a. Explain the building blocks of CD. (08 Marks)
b. Explain scripts and write a script for a restaurant. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.