

MASTER OF SCIENCE (COMPUTER SCIENCE) (CBCS-2018 COURSE)
M.Sc. (Computer Science) Sem-III : WINTER- 2022
SUBJECT : ARTIFICIAL INTELLIGENCE

Day : Tuesday

Time : 02:00 PM-05:00 PM

Date : 27-12-2022

W-20054-2022

Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat labelled diagrams **WHEREVER** necessary.
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Q.1 How the performance of an algorithm is evaluated? Compare different (15)
uninformed search strategies in terms of four evaluation criteria.

OR

Explain Forward chaining and Backward chaining with the help of suitable example.

Q.2 A) Answer any **ONE** of the following: (08)

- i) Explain the state of Art of Artificial Intelligence.
- ii) Write a note on Genetic Algorithms.

B) Answer any **ONE** of the following: (07)

- i) Elaborate the concept of Expert system with suitable example.
- ii) What is meant by unsupervised learning? Explain in detail.

Q.3 Answer any **THREE** of the following: (15)

- a) Describe the semantics of Belief Network.
- b) Explain the structure Intelligent Agent.
- c) Define the terms:
 - i) Communication
 - ii) Speech act
- d) Explain Depth First Search method with suitable example.
- e) Describe the various components of Knowledge Based System.

Q.4 Write short notes on any **THREE** of the following: (15)

- a) Game Playing
- b) Heuristic Search
- c) Applications of ANN
- d) Formal grammar for subset of English
- e) Natural Language Processing

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