

Roll No.

Total No. of Pages : 02

Total No. of Questions : 07

B.Sc (IT) (Sem.-5)
ARTIFICIAL INTELLIGENCE

Subject Code : UGCA-1945

M.Code : 90396

Date of Examination : 02-01-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **SIX** questions carrying **TEN** marks each and students have to attempt any **FOUR** questions.

SECTION-A

1. Write briefly :

- (a) Name the basic elements of AI.
- (b) What is state space search?
- (c) What is a frame problem?
- (d) What is an expert system Shell?
- (e) Define terms '*fact*' and '*Rule*'.
- (f) What are the various applications of AI?
- (g) What is rule based programming?
- (h) What is the role of linguistics in NLP?
- (i) Define expert system and knowledge base.
- (j) What are forward and backward chaining?

SECTION-B

2. (a) What is Artificial Intelligence? Explain how an AI system is different from a conventional computing System?

(b) Explain the methods of knowledge acquisition.
3. What are the various Parsing techniques in Natural language Programming? Explain.
4. Define Knowledge. Compare and contrast procedural knowledge, inferential knowledge and inheritable knowledge.
5. What are various production system characteristics? Discuss the various issues involved in the design of search programs.
6. What is the need for the expert systems? Explain the architecture of expert system.
7. Represent each of the following sentences in first-order logic.
 - (a) A whale is a mammal.
 - (b) Jane loves John.
 - (c) John knows Jane's father.
 - (d) If it's raining, then the ground is wet.
 - (e) If the switch is on and the light is off then the light-bulb is broken.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.