

2021

Full Marks : 60

Time : 3 Hours

Sem-6

Candidates are required to give their answer in their own words as far as practicable. Their figures in the margin indicate full marks.

Instructions:

Group - A is compulsory and will contain **two** questions. Questions **1** carry **10** marks and questions **2** have **5** marks.

Group - A

1. Solve **all** questions. 1×10=10

(i) When talking to a speech recognition program, the program divides each second of your speech into 100 separate

.....

(a) Codes

(b) Phonemes

(c) Samples

(d) Words

(ii) Which kind of planning consists of successive representations of different levels of a plan ?

(a) hierarchical planning

(b) non-hierarchical planning

(c) project planning

(d) all of the mentioned

(iii) Decision support programs are designed to help managers make

(a) budget projections

(b) visual presentations

(c) business decisions

(d) vacation schedules

(iv) To invoke the LISP system, you must enter

(a) AI

(b) LISP

(c) CL (Common Lisp)

(d) Both LISP and CL

(v) Ambiguity may be caused by

(a) syntactic ambiguity

(b) multiple word meanings

(c) unclear antecedents

(d) all of the mentioned

(vi) What are the two subfields of Natural language processing ?

(a) symbolic and numeric

(b) time and motion

(c) algorithmic and heuristic

(d) understanding and generation

(vii) A bidirectional feedback loop links computer modeling with

- (a) artificial science
- (b) heuristic processing
- (c) human intelligence
- (d) cognitive science

(viii) An Artificial Intelligence technique that allows computers to understand association and relationships between objects and events is called

- (a) heuristic processing
- (b) cognitive science
- (c) relative symbolism
- (d) pattern matching

(ix) What is the field that investigates the mechanics of human intelligence ?

- (a) history
- (b) cognitive science
- (c) psychology
- (d) sociology

(x) What is the name of the computer program that simulates the thought processes of human beings?

- (a) Human logic
- (b) Expert reason
- (c) Expert system
- (d) Personal information

2. Solve **all** questions :

1×5=5

- (i) What is AI ?
- (ii) What do you mean by Expert System ?
- (iii) Define any AI Programming Language
- (iv) What is Machine Learning ?
- (v) What are the composition for agents in artificial intelligence ?

Group - B

Solve any **three** :

15×3=45

3. (a) Define AI and its types. 7.5
(b) What is Intelligent agent in AI ? Define Background and Application of AI. 7.5
4. (a) The advantages disadvantages of Depth first search algorithm ? 7.5
(b) Define Breadth first search algorithm. 7.5
5. (a) Define First Order Predicate Logic. 7.5
(b) Explain Resolution principles. 7.5
6. (a) What is heuristic search technique ? List the drawback of a heuristic search technique. 7.5
(b) Explain Production Rules. 7.5

7. Write short notes on any **two** : 7.5×2=15

- (a) Parsing Techniques
(b) Frames
(c) Scripts
(d) Conceptual Graph
(e) Transformational Grammars
