

(6 pages)

Reg. No. :

Code No. : 21042

Sub. Code : GMCA 5 A

B.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2017.

Fifth Semester

Computer Application — Main

Major Elective — ARTIFICIAL INTELLIGENCE

(For those who joined in July 2012-2015)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. In AI, a representation of _____ is a combination of data structures and interpretive procedures that is used in the right way in a program.
- (a) Knowledge
 - (b) Power
 - (c) Strength
 - (d) Intelligence

2. _____ is an environment in which the search takes place.
- (a) Problem place
 - (b) Problem instance
 - (c) Problem space
 - (d) None of the above
3. What is the term used for describing the judgmental or commonsense part of problem solving?
- (a) Heuristic
 - (b) Critical
 - (c) Value based
 - (d) Analytical
4. The problem space of means-end analysis has
- (a) An initial state and one or more goal states
 - (b) One or more initial states and one goal state
 - (c) One or more initial states and one or more goal state
 - (d) One initial state and one goal state
5. The _____, at which facts are described.
- (a) Knowledge level
 - (b) Semantic level
 - (c) Symbol level
 - (d) Facts level
6. The Full form of wff's is
- (a) Well formula form
 - (b) Well facts form
 - (c) Well formed formulas
 - (d) Well formula facts

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7. Knowledge may be

I. Declarative.

II. Procedural.

III. Non-procedural.

(a) Only (I) above

(b) Only (II) above

(c) Only (III) above

(d) Both (I) and (II) above

8. Which of the following is used to diagnoses infectious diseases?

(a) OPS5

(b) ELIZA

(c) MYCIN

(d) RETE

9. The Minimax search procedure is a

(a) Breadth-First-Search

(b) Depth-First-Search

(c) Best-First-Search

(d) Hill climbing

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10. Which of the following refinements avoids horizon effect?

(a) Secondary search

(b) Waiting for quiescence

(c) Book moves

(d) All of the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What is an AI Technique?

Or

(b) Explain how to define a problem as state space search.

12. (a) Write an algorithm for Generate-and-Test search techniques. Explain with example.

Or

(b) How to represent the problem using AND-OR Graphs? Explain in detail.

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13. (a) Write a note on Procedural Knowledge.

Or

- (b) Write a Unify algorithm? Explain.

14. (a) Write the difference between logic and prolog representation.

Or

- (b) Explain the working mechanism of Forward reasoning.

15. (a) With example, explain one-ply search and two-ply search.

Or

- (b) Discuss the basic characteristics of an expert system.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Briefly explain A Water Jug Problem with neat example.

Or

- (b) Describe Heuristic search with suitable example.

17. (a) Discuss any one of the searching techniques with an example.

Or

- (b) Write about constraint satisfaction? Explain with an algorithm.

18. (a) With an example, explain mutilated checker board problem.

Or

- (b) Briefly explain the conversion procedure from facts to clause form.

19. (a) Compare and explain procedural and declarate knowledge.

Or

- (b) Discuss matching.

20. (a) Explain in detail about minimax search procedure.

Or

- (b) Explain the following expert system application.

ELIZA.

