(6 pages) **Reg. No. : .....**

Code No. : 10756 **Sub. Code : R 3 CS 5 A/ R 3 CA 5 A/B 3 CS 5 A/ B 3 CA 5 A**

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2012.

Fifth Semester

Computer Science – Main

Elective — ARTIFICIAL INTELLIGENCE

(Also common to BCA)

(For those who joined in July 2008 and afterwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. EPAM Means

(a) Elementary perceive and memorize

(b) Elementary perfect and memorize

(c) Educational perceiver and memorize

(d) None of the above

2. Basic production system language is

(a) SOAR (b) BASIC

(c) OPSS (d) ADA

3. The probability function for simulated annealing is p=e-Δe/kT, where Dk is

(a) Energy level (b) Boltmann's constant

(c) Temperature (d) None of the above

4. Foothills is derived from

(a) Plateau (b) Local maxima

(c) Ridge (d) None of the above

5. "Spot is a dog" is represented in logic as

(a) Dog (spot) (b) Spot (dog)

(c) Dog.spot (d) Spot+dog

6. "It is now 1991" represented by

(a) Now = 1991 (b) ⌉now = 1991

(c) Now = ⌉1991 (d) Now not = 1991

7. Example of Backward changing rules system is

(a) Query system (b) Non-query system

(c) Bycheck system (d) Bell system

8. Program written in pure PROLOG are composed only of

(a) Horn clauses (b) Bill gates

(c) Balagursamy (d) Dennis

9. Which function is used to find the best move in name playing?

(a) Static evaluation function

(b) Start evaluation

(c) Mechanic evaluation

(d) None of the above

10. The first program to use learning techniques to construct rules for an expert system automatically

(a) Central (b) TEIRESIAS

(c) SALT (d) MYCIN

PART B — (5 × 5 = 25 marks)

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

11. (a) What are the characteristics of a problem in the state space search?

Or

(b) Write a solution to Water Jug problem.

12. (a) Explain any one control strategies of production systems.

Or

(b) What are issues in the design of search programs?

13. (a) Write short notes on constraint satisfaction.

Or

(b) Explain mean ends algorithm.

14. (a) Write short notes on Evaluation Function.

Or

(b) Define matching? Explain indexing.

15. (a) Explain minimax search procedure.

Or

(b) Explain using books moves method.

PART C — (5 × 8 = 40 marks)

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

16. (a) Define artificial intelligence. Explain the various characteristics of an AI problem.

Or

(b) Discuss breadth-first search algorithm in detail.

17. (a) Discuss about Hill climbing.

Or

(b) Explain robot's operators with example.

18. (a) Explain resolution in predicate logic.

Or

(b) Discuss inferential knowledge and procedural analysis.

19. (a) Explain the unification algorithm in detail.

Or

(b) Explain logic programming.

20. (a) Explain ELIZA-DENDRAL.

Or

(b) Explain the applications of expert system briefly.

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