

AR - 2522

Fifth Semester M. C. A. Examination

ARTIFICIAL INTELLIGENCE

5 MCA I

(USC - 15539)

P. Pages : 3

Time : Three Hours }

[Max. Marks : 80

- Note :** (1) Due credit will be given to neatness and adequate dimensions.
(2) Assume suitable data wherever necessary.
(3) Illustrate your answer wherever necessary with the help of neat sketches.
(4) Use pen of Blue/Black ink/refill only for writing the answer book.

1. (A) Explain Importance of knowledge and knowledge based system. 6
(B) Give and explain various functions in LISP with example. 7

OR

2. (A) What is AI ? What is the need of AI in Engineering ? 6
(B) Explain the following LISP functions :—
(i) (car' (abc)),
(ii) (cdr' (abc)),
(iii) (cons*a' (bc)). 7

3. (A) State and explain principle of resolution. 6
(B) State and explain syntax and semantics of ROPL. 7

OR

4. (A) Explain properties of statement. 6
(B) What is unification ? Explain unification algorithm. 7

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5. (A) State and explain Truth Maintenance System (TMS). 7

(B) Explain following:—

(i) Default reasoning.

(ii) Closed – world assumption.

OR

6. (A) What is meant by belief network ? Explain with a suitable example. 7

(B) Explain Temporal logics. 7

7. (A) Explain types of uniformed search problems. 6

(B) Explain the following :—

(i) Hill Climbing.

(ii) Best First Searching Method.

OR

8. (A) Define and explain branch and bound search with suitable diagram. 7

(B) Explain General Learning Model with diagram. 7

9. (A) What are the different types of learning ? Explain. 6

(B) Explain mean–end–analysis. 7

OR

10. (A) How can you build the clusters of network ? Explain with an example. 6

(B) What is inductive bias ? 7

11. (A) What are the features of Expert Systems ? Explain in detail. 7

(B) Describe the following :—

- (i) Associative Network Architecture.
- (ii) Blackboard Architecture.

6

OR

12. What is Expert System ? Draw the block diagram of typical expert system. Explain. Give an example of few expert systems and explain its characteristics and features.

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