

GSQ/D-22**1175****ARTIFICIAL INTELLIGENCE****Paper : BCA-353**

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (i) Define artificial intelligence.
- (ii) State any *two* applications of AI.
- (iii) What is an expert system ?
- (iv) State any *two* limitations of expert systems.
- (v) What is meant by state space search ?
- (vi) What is Heuristic Search ?
- (vii) What does NLP stand for ?
- (viii) What does Local Maximum means ? **8×2=16**

Unit I

2. (a) State and explain various applications of AI. **8**

- (b) What is a Turing test ? How is it performed ?
Explain. 8
3. (a) Comment on "Can a Mechine Think". 6
(b) Define problem representation in Artificial Intelligence. What are the different methods of problem representation in Artificial Intelligence ? 10

Unit II

4. What are the components of Expert Systems ? Explain along with various characteritics of an Expert System.16
5. Discuss Expert System Life-cycle process in detail. 16

Unit III

6. Explain the following : 16
(a) Breadth First Search
(b) Best First.
7. What is search process in AI ? Explain with different types of search techniques. 16

Unit IV

8. What is Robotics ? Explain the concept of a robot along with its major components. 16

9. What is Natural Language Processing ? What is its need ? What are the fundamental problems of Natural Language Processing ? 16