

**Elective-II : Artificial Intelligence**

P. Pages : 2

Time : Three Hours



**NJR/KS/18/4704**

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.
  8. Due credit will be given to neatness and adequate dimensions.
  9. Assume suitable data whenever necessary.
  10. Illustrate your answers whenever necessary with the help of neat sketches.
  11. Use of non programmable calculator is permitted.

1. a) What is Intelligence agent? Explain in brief. 7
- b) What are the major component of AI system. 7

**OR**

2. a) What do you mean by searching for solutions? Explain in detail. 7
- b) Give the comparison between human brain and computer intelligence. 7
3. a) What do you mean by heuristic? Explain it for search? 7
- b) Explain 3 important mentars of Hill climbing search. 6

**OR**

4. Write in brief about 13
- i) Depth first search
- ii) Breadth first search
5. a) Explain Forward chaining and backward chaining. 7
- b) Draw and explain the knowledge pyramid diagram. 6

**OR**

6. a) What is knowledge engineering? Explain in detail? 6
- b) Explain in detail Turing test for knowledge. 7

7. a) Write short note on:

- i) Reinforcement learning.
- ii) Inductive learning.

7

6

**OR**

8. Write short note on

- i) EM algorithm.
- ii) Learning by observation.

7

6

9. a) Draw and explain the architecture of expert system in brief?

7

b) What are the various functions of expert system.

6

**OR**

10. a) Write a short note on Waltz Algorithm.

7

b) Describe any two best expert system.

6

11. a) Write a note on Semantic Interpretations?

7

b) Explain Ambiguity and disambiguation.

7

**OR**

12. a) What do you mean by discourse understanding? Explain in detail.

7

b) Explain with example probabilistic language model.

7

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