

Dr. Shyama Prasad Mukherjee University, Ranchi  
Master of Computer Applications,  
Mid Sem Exam, Semester – IV, 2024

Subject – Artificial Intelligence (PRMCA402)  
Direction: Answer any three from group B

Group- A

\*5=5

1. All questions are compulsory.

i) Artificial Intelligence is about \_\_\_\_\_.

- (a) Playing a game on Computer
- (b) Making a machine Intelligent
- (c) Programming on Machine with your Own Intelligence
- (d) Putting your intelligence in Machine

ii) The search algorithm which is similar to the minimax search, but removes the branches that don't affect the final output is known as \_\_\_\_.

- (a) Depth-first search
- (b) Breadth-first search
- (c) Alpha-beta pruning
- (d) None of the above

ii) Decisions of Victory/Defeat are made in Game trees using which algorithm?

- (a) DFS
- (b) BFS
- (c) Heuristic Search
- (d) MiniMax Algorithm

iii) What are the two main features of Genetic Algorithm?

- (a) Fitness function & Crossover techniques
- (b) Crossover techniques & Random mutation
- (c) Individuals among the population & Random mutation
- (d) Random mutation & Fitness function

iii) A\* algorithm is based on \_\_\_\_\_

- (a) Breadth-First-Search
- (b) Depth-First –Search
- (c) Best-First-Search
- (d) Hill climbing

Group- B

3\*5=15

2. What is Constraint Satisfaction Problem? Solve following cryptarithmic problem:  
**SEND + MORE = MONEY**

3. Explain genetic algorithm and its operators.

4. What do you mean by Neural network?

5. Explain a\* Algorithm with help of example.

6. What is heuristic search? Explain hill climbing algorithm.