Registration No : | | | | | | | | | | |

Total Number of Pages : 01 **B.Tech**

PCS3D001

3rd Semester Back Examination 2019-20
ARTIFICIAL INTELLIGENCE
BRANCH : CSE
Max Marks : 100
Time : 3 Hours
Q.CODE : HB940

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.
The figures in the right hand margin indicate marks.

Part- I

Q1 **Only Short Answer Type Questions (Answer All-10)** **(2 x 10)**

a) What is Tower of Hanoi?
b) Define Artificial Intelligence
c) What is a uniform cost search algorithm?
d) What is a breadth-first search algorithm?
e) What is an A* algorithm search method?
f) What is a bidirectional search algorithm?
g) How are game theory and AI related?
h) Define NLP
i) Compare between Best-first Search and Depth-first Search
j) What is NNL.

Part- II

Q2 **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)** **(6 x 8)**

a) What is an expert system? What are the characteristics of an expert system?
b) Discuss on Statistical Natural Language Processing
c) Explain Semantic Nets with example
d) Compare between Procedural Versus Declarative Knowledge
e) Discuss on Heuristic Search Techniques
f) Discuss about Constraint satisfaction problem.
g) Differentiate Supervised and Unsupervised learning.
h) Discuss the use of CYC in AI
i) Compare between knowledge and data.
j) Explain Nonlinear Planning Using Constraint Posting.
k) Write short notes on Nonlinear Planning Using Constraint Posting
l) Why Constraint Satisfaction is required? explain in detail.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3 **a)** Discuss the issues of knowledge representation. **(8)**
b) Then discuss the knowledge in expert system i details with proper examples. **(8)**

Q4 **a)** Define and explain the component of planning graph. **(8)**
example.
b) Explain the use of planning graph in providing better heuristic estimation with suitable **(8)**

Q5 **a)** Explain learning in decision trees with an example. How it is used to take decision. **(8)**
b) Describe multilayer feed-forward networks. **(8)**

Q6 **a)** Discuss in detail the syntactic analysis (PARSING) with suitable examples. **(8)**
b) Compare between Forward Versus Backward Reasoning. **(8)**