Total No. of Questions : 8]

SEAT No. :

PA-1611

[Total No. of Pages : 2

[5926]-245

T.E. (AI & DS)

PATTERN RECOGNITION

(2019 Pattern) (Semester-I) (Elective-I) (317522B)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Neat diagrams must be drawn whenever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Clarify the Chomsky Normal form with suitable example? **[9]**

b) Describe the Grammar Based Approach and its Application in detail. **[8]**

OR

Q2) a) Describe any two examples of String Generation as Pattern Description? **[9]**

b) Give an Abstract view of parsing problem? **[8]**

Q3) a) Compare Homomorphism and Isomorphism? **[9]**

b) Analyze different application of Relational Graph to Pattern Recognition? **[8]**

OR

Q4) a) Describe Clique finding algorithm with suitable example? **[8]**

b) Describe Canonical definite finite state grammar (CDFSG) with suitable example? **[9]**

Q5) a) Explain CAM & other Neural Memory Structure? **[9]**

b) Describe Neural Networks as a Black Box Approach? **[9]**

OR

P.T.O.

Q6) a) Describe with neat diagram Artificial Neuron Activation and output characteristics? **[9]**

b) What are the different reasons to adopt a Neural Computational Architecture? **[9]**

Q7) a) Explain the structure of a Multiple Layer Feedforward Network? **[9]**

b) Draw & explain how to train the feedforward network using Generalized delta Rule? **[9]**

OR

Q8) a) Describe how the character classification is done with pattern Associator? **[9]**

b) Draw & Explain Summary of the Back Propagation learning Procedure? **[9]**