

Total No. of Questions : 8]

SEAT No. :

**PC1738**

[Total No. of Pages : 2

**[6353]-55**

**T.E. (Artificial Intelligence & Data Science)**

**PATTERN RECOGNITION**

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

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

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

**Q1)** a) Explain Blocks Word Description String Generation example as Pattern Description. [9]

b) Describe an Abstract View of Parsing Problem? [8]

OR

**Q2)** a) Describe the Chomsky Normal form with suitable example. [9]

b) Identify the different Elements of Formal Grammars. [8]

**Q3)** a) Describe the Design and Selection of Similarity Measures. [9]

b) Explain Clique finding algorithm with suitable example. [8]

OR

**Q4)** a) Distinguish between Homomorphism and Isomorphism. [8]

b) Draw and Explain Grammatical Interface Model and its objective. [9]

**Q5)** a) Describe with neat diagram Artificial Neuron Activation and Output Characteristics. [9]

b) Describe the different reasons to adopt a Neural Computational Architecture. [9]

OR

**P.T.O.**

- Q6)** a) Explain different Characteristics of Neural Computing Applications. [9]  
b) Describe CAM & other Neural Memory Structure. [9]

- Q7)** a) Explain how the character classification is done with Pattern Associator? [9]  
b) Explain Summary of the Back Propagation learning Procedure with suitable diagram. [9]

OR

- Q8)** a) Draw & explain how to train the feedforward network using Generalized delta Rule? [9]  
b) Draw & Explain structure of a Multiple Layer Feedforward Network.[9]

