

Total No. of Questions : 4]

SEAT No. :

P8466

[Total No. of Pages : 2

Oct-22/BE/Insem-42

B.E. (Computer Engg.)

MACHINE LEARNING

(2019 Pattern) (Semester - VII) (410242)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4.
- 2) Neat diagrams must be drawn whenever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

**Q1)** a) Compare machine learning vs Artificial Intelligence. [5]

b) Describe parametric and Non-parametric machine learning models. [5]

c) Explain various Data formats that conform ML elements. [5]

OR

**Q2)** a) Explain supervised, unsupervised and semi supervised learning. [7]

b) Describe various statistical learning approaches. [8]

**Q3)** a) Consider a vector  $x = (23, 29, 52, 31, 45, 19, 18, 27)$  Apply feature scaling and find out min-max scaled values as well as z-score values. [8]

b) Explain the process of Principal Component Analysis (PCA) in brief. [7]

OR

P.T.O.

- Q4)** a) How to handle missing values in a dataset that will be used for training the ML model? [5]
- b) Explain the types of wrapper methods for feature selection. [5]
- c) Explain Local Binary Pattern (LBP) feature extraction technique with suitable example. [5]

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