

Total No. of Questions : 4]

SEAT No. :

P5190

[Total No. of Pages : 2

[6188]-142

**B.E. (Computer Engineering) (Insem)
MACHINE LEARNING
(2019 Pattern) (Semester - VII) (410242)**

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Figures to the right side indicate full marks.
- 3) Draw neat diagrams wherever necessary.
- 4) Assume suitable data if necessary.

- Q1)** a) Compare Machine Learning with traditional programming. Discuss types of Machine Learning with suitable examples. [5]
- b) What are various Statistical Learning Approaches? [5]
- c) Explain different dataformats used in Machine Learning. [5]

OR

- Q2)** a) What is Machine Learning? Explain applications of Machine Learning in data science. [5]
- b) Explain Geometric Model and Probabilistic Model with suitable examples. [5]
- c) How machine learning model works? Explain various steps involved. [5]

- Q3)** a) What is feature selection? Explain filtering technique. [5]
- b) Explain kernel PCA in detail. [5]
- c) Calculate LBP code generated value for the central point in the neighborhood of 8 pixels as shown below. [5]

| | | |
|----|----|----|
| 10 | 12 | 18 |
| 7 | 9 | 6 |
| 9 | 2 | 4 |

OR

P.T.O.

- Q4)** a) Explain Min-Max scaling with suitable example. [5]
- b) What is Matrix factorization? Explain content based filtering with an example. [5]
- c) Given following data for attribute AGE calculate Z- score normalization. [5]
- AGE = {18, 22, 25, 42, 28, 43, 33, 35, 56, 28}

