

Total No. of Questions : 4]

SEAT No. :

PE-360

[Total No. of Pages : 2

[6580]-546

**B.E. (Computer Engineering) (Insem)**  
**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 indicates full marks.
- 4) Assume suitable data, if necessary.

**Q1) a)** Explain models of Machine learning in detail. [5]

**b)** Write short note on : [5]

i) Learn ability

ii) Statistical Learning approach

**c)** What is Machine Learning? Compare the Supervised Learning with Unsupervised Learning. [5]

OR

**Q2) a)** Explain applications of Machine Learning in the real world. [5]

**b)** Explain Geometric Model and Probabilistic Model with suitable examples. [5]

**c)** Explain the data formats used in ML when data is multidimensional. [5]

**Q3) a)** Explain Principal Component Analysis (PCA) and it's Algorithm in detail. [5]

**b)** Explain the methods for feature selection. [5]

**c)** Calculate the LBP Code for centre pixel. [5]

5	4	3
4	3	1
2	0	3

P.T.O.

OR

- Q4)** a) Explain feature extraction technique with suitable example. [5]
- b) With reference to feature engineering, Explain the term data scaling and normalization task. [5]
- c) Time between failures (in hr.) of a wire cutter used in a cookie manufacturing oven is given in table. The function of wire-cut is to cut the dough into cookies of desired size. Calculate the mean, median & mode of time between failures of wire-cut. [5]

2	22	32	39	46	56	76	79	88	93
3	24	33	44	46	66	77	79	89	99
5	24	34	45	47	67	77	86	89	99
9	26	37	45	55	67	78	86	89	99
21	31	39	46	56	75	78	87	90	102