

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: BCA
BRANCH: BCA

SEMESTER : V/ADD
SESSION : MO/2025

SUBJECT: CN303 INTRODUCTION TO MACHINE LEARNING

TIME:02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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|--------|--|-------|----|
| Q.1(a) | Explain the term Supervised Machine Learning. | [2] 1 | 2 |
| Q.1(b) | Explain any three application areas of Machine Learning. | [3] 1 | 2 |

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|--------|--|-------|---|
| Q.2(a) | What are the different techniques used in supervised machine learning? | [2] 1 | 2 |
| Q.2(b) | Find the Eigen value and Eigen vectors of the following matrix: | [3] 1 | 3 |

$$\begin{bmatrix} 5 & 4 \\ 1 & 2 \end{bmatrix}$$

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|--------|--|-------|---|
| Q.3(a) | What do you mean by feature selection? | [2] 1 | 2 |
| Q.3(b) | Identify “Prediction of house price is a regression/classification problem” Justify your answer. | [3] 2 | 4 |

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|--------|---|-------|---|
| Q.4(a) | Explain the different techniques of wrapper method for feature selection? | [2] 3 | 2 |
| Q.4(b) | How to use a regression equation to predict the glucose level given the age in the following data set | [3] 2 | 3 |

Subject	Age	Glucose Level
1	43	99
2	21	65
3	25	79
4	42	75
5	57	?

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|--------|--|-------|---|
| Q.5(a) | Explain binomial logistic regression with example. | [2] 1 | 2 |
| Q.5(b) | Differentiate Logistic regression and Linear regression. | [3] 1 | 4 |

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