Register No.: [ ]

382

April 2024

Time – Three hours
(Maximum Marks: 100)

[N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.

2. Answer all the questions either (a) or (b) in Part-B. Each question carries 14 marks.]

PART – A

1. Define mean and variance.
2. Write the differences between over fitting and underfitting.
3. What is dataset?
4. Why do we need normalization in dataset?
5. What is regression?
6. Differentiate supervised and unsupervised machine learning algorithms.
7. What is specificity?
8. Why do we need visualization library?
9. List the applications of image recognition.
10. Define behavioral analysis.

PART – B

11. (a) What is machine learning life cycle? Also discuss about gathering data, data preparation and data pre-processing.

(Or)

(b) Explain supervised learning and unsupervised learning algorithms.

12. (a) Discuss about manipulating, sorting and grouping steps on data pre-processing.

(Or)

(b) What is exploratory data analysis? Explain any one of its technique.

13. (a) Explain about k-means clustering and principal component analysis methods.

(Or)

(b) Discuss about support vector machines and random forest machine learning algorithms.

14. (a) Explain about accuracy, precision, F1 score, recall score with their formulas and examples.

(Or)

(b) Discuss about histogram and heat map with examples.

15. (a) Discuss about email spam and online fraud detection with examples.

(Or)

(b) Explain about stock market prediction and sentiment analysis.
