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Seat No. \_\_\_\_\_

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BACHELOR OF COMPUTER APPLICATION (W.E.F. 2022) BCA (2022) Semester - 6 Examination

BCA (2022) SEMESTER-6 MARCH-2025

CS – 33: MACHINE LEARNING WITH PYTHON

Time : 2.5Hours]

[Total Marks : 70

- 1 (A) Answer the following: 4
- 1 Machine Learning is a subset of AI. (True or False)
  - 2 AI stands for \_\_\_\_\_
  - 3 Full Form of DL is \_\_\_\_\_
  - 4 List out types of machine learning.
- (B) Answer in brief (Any one out of two) 2
- 1 Define DL.
  - 2 Define AI
- (C) Answer in detail (Any one out of two) 3
- 1 Explain applications of machine learning.
  - 2 How does machine learning work?
- (D) Write a note on (Any one out of two) 5
- 1 Explain the life cycle of machine learning.
  - 2 Explain types of machine learning.
- 2 (A) Answer the following: 4
- 1 List out types of SVM.
  - 2 Define hyperplane.
  - 3 RBF stands for \_\_\_\_\_
  - 4 What is the full form of SVM?
- (B) Answer in brief (Any one out of two) 2
- 1 How confidence measurement work?
  - 2 What is predictive modelling?
- (C) Answer in detail (Any out of two) 3

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- 1 Explain binarization.
- 2 Explain mean removal.

(D) Write a note on (Any one out of two) 5

- 1 Explain Naïve Bayes Classifier with example.
- 2 Explain normalization with example.

3 (A) Answer the following: 4

- 1 What is the full form of VQ?
- 2 PIL stands for \_\_\_\_\_
- 3 List out types of clustering.
- 4 It is necessary that the clusters formed must be circular in shape. (True or False)

(B) Answer in brief (Any one out of two) 2

- 1 What is clustering?
- 2 What is silhouette score?

(C) Answer in detail (Any one out of two) 3

- 1 Explain agglomerative clustering.
- 2 How VQ works?

(D) Write a note on ( Any one out of two) 5

- 1 Explain K-means clustering with advantages and disadvantages.
- 2 Explain mean shift clustering in detail.

4 (A) Answer the following: 4

- 1 In NLP, the full form of POS is \_\_\_\_\_
- 2 Which library is to be installed to perform NLP programming?
- 3 List out chunking techniques.
- 4 What is tokenization?

(B) Answer in brief (Any one out of two) 2

- 1 List out applications of NLP.
- 2 What is NLP?

(C) Answer in detail (Any one out of two) 3

- 1 Explain applications of text classification.
- 2 Explain common text pre-processing techniques.

(D) Write a note on (Any one out of two) 5

- 1 Explain Lemmatization in detail with example.

2 Explain types of stemmers.

5 (A) Answer the following:

4

- 1 In OpenCV, CV stands for \_\_\_\_\_
- 2 ROI stands for \_\_\_\_\_
- 3 What is positive image?
- 4 Give the syntax of rectangle() function

(B) Answer In brief (Any one out of two)

2

- 1 Explain applications of OpenCV.
- 2 What is object detection.

(C) Answer in detail (Any one out of two)

3

- 1 Write a python script to detect object from an image.
- 2 Explain any 3 functions of cv2 library.

(D) Write a note on (Any one out of two)

5

- 1 Explain the steps to detect mouth from an image with example code.
- 2 Write the python script to detect face and eyes from an image.