Seat No. _____

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.