

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- FEB-2023

COURSE CODE(CREDITS): 20B1WEC532(3)

MAX. MARKS: 15

COURSE NAME: Introduction to Machine Learning

COURSE INSTRUCTORS: Lt. Pragya Gupta

MAX. TIME: 1 Hour

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1. While predicting malignancy of tumour of a set of patients using a classification model, following are the data recorded: [5] (CO1)

- i. Correct predictions – 15 malignant, 75 benign
- ii. Incorrect predictions – 3 malignant, 7 benign

Calculate the error rate, Kappa value, sensitivity, precision, and F -measure of the model.

Q2. What is Bias- Variance tradeoff in Machine Learning . How are over fitting and under fitting related to bias and Variance? [3] (CO1)

Q3. Write the difference between : [3] (CO1)

- i. Nominal and ordinal data
- ii. Box plot and histogram

Q4. A sample of 10 boxes of raisins has following weights (in grams):

25, 28, 29, 29, 30, 34, 35, 35, 37, 38

Make a Box-Whisker Plot of the data. About what percent of the boxes of raisins weighed more than 29 grams? [4] (CO3)