B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

PRE MID TERM 2026-2027
ARTIFICIAL INTELLIGENCE (417) Set-01

Class: X **Time : 1 hr**
Date: **Max Marks: 25**
Admission No. …… **Roll No. :**

General Instructions:

1. *Please read the instructions carefully.*
2. *This Question Paper contain two sections: Section A & Section B.*
3. *Section A has Objective type questions whereas Section B contains Subjective type questions.*
4. *All questions of a particular section must be attempted in the correct order.*
5. ***SECTION A - OBJECTIVE TYPE QUESTIONS (07 MARKS):***
   - i. *This section has 01 question.*
   - ii. *Marks allotted are mentioned against question/part.*
   - iii. *There is no negative marking.*
   - iv. *Do as per the instructions given.*
6. ***SECTION B – SUBJECTIVE TYPE QUESTIONS (18 MARKS):***
   - i. *This section has 12 questions.*
   - ii. *A candidate has to do 8 questions.*
   - iii. *Do as per the instructions given.*
   - iv. *Marks allotted are mentioned against each question/part.*

SECTION A: OBJECTIVE TYPE QUESTIONS

Q.(1) Answer any 7 out of the given 10 questions : **(7 x 1 = 7)**

1. What does Spotify create based on your listening history?
a. Movie suggestions b. Playlists c. Job recommendations d. Shopping ads
2. How do AI system learns?
a. Using human intelligence b. Algorithms and data
c. Interacting with People d. Collecting physical objects
3. What does CRT stand for in digital advertising?
a. Click time rate b. Customer tracking rate
c. Click through rate d. Content time rate
4. What does Descriptive Statistics help us identify in data?
a. Complex algorithms b. Patterns & trends
c. Complicated data d. Collect more data
5. Which metric is used to reduce the no. of false positives and false negatives?
a. Accuracy b. F1 - Score c. Precision d. Recall
6. Which metric measures how many positive predictions made by the model are actually correct?
a. Recall b. Precision c. Accuracy d. F1-Score
7. Which term refers to the actual value being positive, but the model predicting it as negative?
a. True Positive b. False Positive c. False Negative d. True Negative
8. What does a "perfect fit" represent in model evaluation?

a. The ideal balance between complexity and generalisation
b. High bias and low variance
c. Low bias and high variance
d. Overfitting the training data
9. Which of the following are types of motivation?
a. Internal c. External b. Intermediate d. Both a. and c.
10. What comes naturally without efforts?
a. Ability c. Painting b. Interest d. Reading

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 6 out of the given 10 questions: **(6 x 2 = 12)**

Q. (2) What is Stress? Give one example.
Q. (3) What is Emotional Intelligence?
Q. (4) What is Data Science?
Q. (5) What is Under fitting model?
Q. (6) What is F1 Score?
Q. (7) What is No-Code approach?
Q. (8) What is Classification?
Q. (9) What is Teachable Machine?
Q. (10) What are the three main domains of AI?
Q. (11) Write any two ethical concerns around model evaluation.

Answer any 2 out of the given 4 questions: **(2 x 3 = 6)**

Q.(12) Explain a) Google Cloud AutoML b) Orange Data
Q.(13) Explain Accuracy and Error in evaluation metrics with one example each.
Q.(14) Explain any three disadvantage of No-code AI tools.
Q.(15) A machine learning model was tested on 100 emails. The results are shown below:

	Predicted Spam	**Predicted Not Spam**
Actual Spam	40	10
Actual Not Spam	15	35

1. Identify the values of **True Positive (TP), False Positive (FP), False Negative (FN), and True Negative (TN)**.
2. Calculate the **Accuracy** of the model.
3. Briefly explain what a **False Positive** means in this context.

********** ALL THE BEST **********