B.K. BIRLA CENTRE FOR EDUCATION

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

POST-MID TERM 2025-26

ARTIFICIAL INTELLIGENCE (843)

Class : XI SCIENCE/COMMERCE/ARTS　　　　　　　　　**Duration : 1 Hr**
Date　: 10-01-2026　　　　　　　　　　　　　　　　**Max. Marks : 25**
Admission No.:　　　　　　　　　　　　　　　　　**Roll No.:**

General Instructions:

Try to attempt all questions as per given order.

All questions are compulsory.

The Question Paper is divided into Three sections Section A to C.

- Section A has 10 questions attempt only 7 and carry 1 mark each.
- Section B has 10 questions attempt only 6 and carry 2 marks each.
- Section C has 5 questions attempt only 2 and carry 3 marks each.

Section-A

1. What is the primary reason for mitigating bias in Al systems?　　　　　1
   a. To amplify existing problems　　　　　b. To reinforce societal inequalities
   c. To enhance trust and reliability　　　　d. To perpetuate systemic discrimination

2. Which of the following is NOT one of the core principles of Al ethics?　　　　1
   a. Fairness　　　　b. Explainability　　　c. Cost-effectiveness　　　d. Privacy

3. What is the primary cause of facial recognition algorithms having difficulty identifying people　1
   with darker complexions?
   a. Poor camera quality　　　　　　　b. Lack of diverse training data
   c. Over-representation of older faces　　d. Use of outdated algorithms

4. What does bias in Al typically reflect?　　　　　　　　　　　　　1
   a. Technological advancements　b. Social prejudices about race, gender, age, and culture
   c. Random data anomalies d. Errors in coding

5. What is meant by bias awareness in the context of Al?　　　　　　　　1
   a. Understanding that Al systems can show unfair preferences
   b. Ensuring Al systems are technologically advanced
   c. Using only the latest Al algorithms
   d. Avoiding the use of Al in sensitive areas

6. Reinforcement learning is based on　　　　　　　　　　　　　　1
   a. Learning from labelled data　　b. Learning through observation
   c. The trial and error method　　　d. Dimensionality reduction

7. Which of the following is used when a situation might belong to more than one class at the same time?   1
   a. Multi-label classification   b. Binary classification
   c. Multi-class classification   d. Imbalanced classification

8. Which of the following is true about residual error?   1
   a. lower value is better   b. higher value is better
   c. Either a. or b.   d. All of these

9. Which of the following is NOT typically a use case for regression analysis?   1
   a. Weather forecasting b. Finding the causal-effect relationship between variables
   c. Time series modelling d. Grouping data into specified categories

10. Which of the following is NOT an application of linear regression?   1
    a. Predicting the effect of fertiliser on crop yield b. Managing risks and portfolio optimisation
    c. Classifying images of handwritten digits d. Predicting salary based on years of experience

SECTION - B

11. What is AI bias?   2

12. Explain the term Bias Awarness.   2

13. Write the five pillars of AI Ethics.   2

14. What is Ethical Dilemma?   2

15. What is Machine learning?   2

16. What is Reinforcement learning?   2

17. Write two disadvantages of Linear Regression.   2

18. What is Correlation?   2

19. Write two disadvantages of Supervised learning.   2

20. Define dependent and independent variables.   2

SECTION – C

21. Explain any three applications of Clustering.   3

22. Explain Classification process in detail.   3

23. Differentiate between binary and multiclass classification.   3

24. Explain any three strategies for mitigating bias.   3

25. Explain any three reason why AI ethics is important.   3

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