



# B.K. BIRLA CENTRE FOR EDUCATION

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

## ANNUAL EXAMINATION: 2025-26 ARTIFICIAL INTELLIGENCE (843)

Class: XI /SET01

Date: 18-02-2026

Admission No. : .....

Time : 2 Hrs.

Max Marks: 50

Roll No. :

### **General Instructions:**

1. Please read the instructions carefully.
2. This Question Paper consists of 21 questions in two sections : Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
  - i. This section has 05 question.
  - ii. Marks allotted are mentioned against question/part.
  - iii. There is no negative marking.
  - iv. Do as per the instructions given.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
  - i. This section has 16 questions.
  - ii. A candidate has to do 10 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 4 out of the given 6 questions on Employability Skills.**

**(4 x 1 = 4)**

- i. One of the significant ways of being \_\_\_\_\_ is learning to say 'no' without upsetting others.  
a. passive                      b. assertive                      c. passive-aggressive                      d. aggressive
- ii. Which of these is not an example of oral communication?  
a. group discussion                      b. telephone call                      c. video conferencing                      d. email
- iii. If an idea is innovative and the way it is implemented is also innovative, the growth opportunities of the business will  
a. decrease                      b. increase  
c. Neither a or b                      d. Both a and b
- iv. Which among the following businesses is involved in developing the raw materials into finished products to meet the needs of its customers?  
a. entrepreneurship                      b. trading                      c. manufacturing                      d. service
- v. Green policies seek to provide \_\_\_\_\_ with a decent living and a decent job in a healthy environment.  
a. companies                      b. sectors of society                      c. workers                      d. either a or b

- vi. Which of the following mission aims to conserve, restore and expand forest cover?
- a. Swachh Bharat Mission
  - b. Green India Mission
  - c. National Mission on sustainable agriculture
  - d. 'Liter of Light' Mission

**Q.(2) Answer any 5 out of the given 6 questions.**

**(5 x 1 = 5)**

- i. \_\_\_\_\_ extracts information from the spoken and written words using algorithms.
- a. Machine learning
  - b. Computer vision
  - c. Data science
  - d. Natural language processing
- ii. \_\_\_\_\_ helps develop intelligent machines and software that learn, function, and react like humans.
- a. Deep Learning
  - b. Machine Learning
  - c. Artificial Intelligence
  - d. Robotics
- iii. What is the primary goal of data science?
- a. Automating tasks
  - b. Extracting meaningful insights from data
  - c. Enhancing computer vision
  - d. Developing machine learning algorithms
- iv. Which industry is NOT actively seeking AI integration?
- a. Financial services
  - b. Healthcare
  - c. Craft and Artisanal
  - d. Agriculture
- v. Which of the following is a primary responsibility of a Machine Learning Engineer?
- a. Designing hardware components
  - b. Building AI systems and algorithms
  - c. Managing IT infrastructure
  - d. Writing user interface code
- vi. In which sector are Autonomous Vehicle Engineers primarily employed?
- a. Retail
  - b. Automobile
  - c. Media
  - d. Tourism

**Q.(3) Answer any 5 out of the given 6 questions.**

**(5 x 1 = 5)**

- i. What would be the output of the following code?
- ```
import numpy as np
arr_2d = np. array ( [ [1, 2, 3], [4, 5, 6], [7, 8, 9] ] )
print (arr_2d)
```
- a. [12 3] [4 5 6] [7 8 9]
  - b. (1 2 3) (4 5 6) (7 8 9)
  - c. [[1 2 3] (4 5 6) [7 8 9]]
  - d. [[1, 2, 3], [4, 5, 6], (7, 8, 9)]
- ii. What is the main purpose of the Pandas library?
- a. Web development
  - b. Data manipulation and analysis
  - c. Game development
  - d. Graphics design
- iii. What are the two main data structures provided by Pandas?
- a. List and Tuple
  - b. Array and Matrix
  - c. Series and DataFrame
  - d. Dictionary and Set
- iv. Which of the following is not one of the five different stages of design thinking?
- a. Empathise
  - b. Ideate
  - c. Evaluate
  - d. Prototype
- v. How do "Individual Brainstorming" help introverts?
- a. They can express their ideas in writing
  - b. They can voice their thoughts
  - c. They learn to stand for themselves
  - d. They get to know others
- vi. What is crucial for a successful problem-defining process?
- a. Basic analysis and evaluation
  - b. Data cleansing
  - c. Defining the features
  - d. AI Modelling

**Q.(4) Answer any 5 out of the given 6 questions.**

**(5 x 1 = 5)**

- i. What method employs automated software to gather specific information and data from websites?
  - a. Social Media Data Tracking
  - b. Web Scraping
  - c. Satellite Data Tracking
  - d. Online Data Platforms
- ii. Kaggle, GitHub, KDNuggets, and Google Dataset Search are examples of what type of secondary data source?
  - a. Books, textbooks, and encyclopedias
  - b. Web Scraping
  - c. Satellite Data Tracking
  - d. Online Data Platforms
- iii. Which measure of central tendency is most affected by extreme values (outliers)?
  - a. Mean
  - b. Median
  - c. Mode
  - d. All are equally affected
- iv. What is the goal of linear regression?
  - a. To find a polynomial relationship between variables
  - b. To estimate the probability of an event
  - c. To fit a straight line that minimises the sum of squared differences between observed and predicted values
  - d. To group data into clusters
- v. Which of the following is used when a situation might belong to more than one class at the same time?
  - a. Multi-label classification
  - b. Binary classification
  - c. Multi-class classification
  - d. Imbalanced classification
- vi. For which one of these relationships could we use a regression analysis?
  - a. Relationship between political party membership and opinion about Euthanasia.
  - b. Relationship between gender and whether person has a mole
  - c. Relationship between weight and height
  - d. Relationship between eye colour (blue, brown, etc.) and hair colour (black, blond, etc.).

**Q.(5) Answer any 5 out of the given 6 questions.**

**(5 x 1 = 5)**

- i. What is a key characteristic of a rule-based chatbot?
  - a. Uses Natural Language Processing and Machine Learning
  - b. Works with established rules and decision trees
  - c. Provides personalised interactions based on user preferences
  - d. Prone to biases in training data
- ii. What ethical considerations are associated with AI-based chatbots?
  - a. Difficulty in understanding complex language
  - b. Significant development expenditures
  - c. Privacy, manipulation, and responsible use
  - d. Consistent and accurate responses
- iii. Which phase of NLP involves studying and identifying a language's word structure and breaking down text into words, phrases, and paragraphs?
  - a. Syntactic Analysis
  - b. Lexical Analysis
  - c. Semantic Analysis
  - d. Pragmatic Analysis
- iv. What is one potential consequence of biased AI systems mentioned in the text?
  - a. Decreased trust in technology
  - b. Increased fairness in decision-making
  - c. Enhanced user satisfaction
  - d. Greater reliance on AI systems
- v. What is the primary cause of facial recognition algorithms having difficulty identifying people with darker complexions?
  - a. Poor camera quality
  - b. Lack of diverse training data
  - c. Over-representation of older faces
  - d. Use of outdated algorithms
- vi. What is meant by bias awareness in the context of AI?
  - a. Understanding that AI systems can show unfair preferences
  - b. Ensuring AI systems are technologically advanced
  - c. Using only the latest AI algorithms

d. Avoiding the use of AI in sensitive areas

## **SECTION B: SUBJECTIVE TYPE QUESTIONS**

**Answer any 3 out of the given 5 questions on Employability Skills.**

**(3 x 2 = 6)**

**Answer each question in 20-30 words.**

Q6. What is the meaning of Goal Setting?

Q7. What is grooming?

Q8. Define word processor.

Q9. What is the use of print preview?

Q10. Define: a. Entrepreneur      b. Employee

**Answer any 4 out of the given 6 questions in 20-30 words each.**

**(4 x 2 = 8)**

Q11. What do you mean by Computer Vision?

Q12. What are the responsibilities of a Data Scientist in the AI field?

Q13. Define testing data.

Q14. List any two application of KNN.

Q15. List the five phases of NLP.

Q16. Why is privacy a significant concern in AI ethics?

**Answer any 3 out of the given 5 questions in 50-80 words each.**

**(3 x 4 = 12)**

Q17. Explain any four common job roles in AI.

Q18. Explain any four features of Python.

Q19. Elaborate the five different stages of design thinking.

Q20. Differentiate between Primary Data and Secondary data.

Q21. Define: a. Causation      b. Outlier      c. Correlation      d. Classification

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