



# B.K. BIRLA CENTRE FOR EDUCATION

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



## PERIODIC TEST 1 2026-27

### MARKING SCHEME ARTIFICIAL INTELLIGENCE (843) – Set 02

Class : XII A/B (SUBJECT-05)

Date :

Admission No.:

Duration : 1 Hr

Max. Marks : 25

Roll No.:

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |
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|    | <b>General Instructions:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
|    | 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.                                                                                                                                                                                                                                                                                                                                                                                                                     |   |
|    | <ul style="list-style-type: none"> <li>Section A has 10 questions and attempt any 7, carry 1 mark each.</li> <li>Section B has 10 questions and attempt any 6, carry 2 marks each.</li> <li>Section C has 4 questions and attempt any 2, carry 3 marks each.</li> </ul>                                                                                                                                                                                                               |   |
|    | <b>Section-A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 1. | <ol style="list-style-type: none"> <li><b>b.</b> It helps in efficient selection, modification, addition, and deletion of data.</li> <li><b>b.</b> loc[ ]</li> <li><b>b.</b> Punctuating</li> <li><b>c.</b> Has multiple unrelated themes</li> <li><b>c.</b> Motivation</li> <li><b>a.</b> Personality disorder</li> <li><b>c.</b> Ctrl + V</li> <li><b>b.</b> Animation</li> <li><b>d.</b> Fictional Storytelling</li> <li><b>c.</b> Books, Journals, and Research Papers</li> </ol> | 1 |
|    | <b>Section - B</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |

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|  | <p><b>1. What is slicing in NumPy?</b><br/>Slicing in NumPy is used to extract a portion of an array using index ranges. It allows you to access a subset of elements without copying the entire array. This helps in efficient data manipulation.</p> <p><b>2. Explain Positive and Negative indexing.</b><br/>Positive indexing starts from 0 and moves forward (0, 1, 2, ...). Negative indexing starts from the end of the array with -1 as the last element. It helps in accessing elements from both directions.</p> <p><b>3. What do you understand by feedback?</b><br/>Feedback is the response or reaction given to someone's performance or behavior. It helps individuals understand their strengths and areas of improvement. Feedback can be positive or constructive.</p> <p><b>4. Write two factors that influence active listening.</b></p> <ul style="list-style-type: none"> <li>• <b>Attention level:</b> Being focused helps in better understanding.</li> <li>• <b>Environment:</b> Noise or distractions can affect listening ability.</li> </ul> <p><b>5. What is personality disorder?</b><br/>A personality disorder is a mental condition where a person's behavior and thinking patterns differ from normal expectations. It can affect relationships and daily functioning. Proper support and treatment are often needed.</p> <p><b>6. Why is self-management important?</b><br/>Self-management helps individuals control their emotions, behavior, and time effectively. It improves productivity and decision-making. It also helps in achieving personal and professional goals.</p> <p><b>7. What is Slide?</b><br/>A slide is a single page of a presentation created using presentation software. It contains text, images, charts, or multimedia. Slides are used to present information clearly.</p> <p><b>8. What is cell address?</b><br/>A cell address is the unique identification of a cell in a spreadsheet. It is formed by combining the column letter and row number (e.g., A1). It helps in locating and referencing data.</p> | 2<br>2 |
|  | <p><b>9. What is Primary data source?</b><br/>Primary data source is the original data collected directly from first-hand sources. It is collected through methods like surveys, interviews, or observations. This data is specific and reliable for research.</p> <p><b>10. What is root cause analysis?</b><br/>Root cause analysis is a method used to identify the main reason behind a problem. It helps in finding permanent solutions instead of temporary fixes. It is widely used in problem-solving and data analysis.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |
|  | <b>Section - C</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |

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| 21. | <p><b>1. Define the following attributes of Pandas:</b></p> <p><b>a. df.shape</b><br/> <code>df.shape</code> returns the number of rows and columns in a DataFrame as a tuple. It helps in understanding the size of the dataset. For example, (50, 4) means 50 rows and 4 columns.</p> <p><b>b. df.head(n)</b><br/> <code>df.head(n)</code> displays the first <i>n</i> rows of the dataset. It is useful for quickly checking the structure of data. By default, it shows 5 rows.</p> <p><b>c. df.tail(n)</b><br/> <code>df.tail(n)</code> shows the last <i>n</i> rows of the dataset. It helps to view the ending part of the data. By default, it displays 5 rows.</p> <p><b>2. Write all the phases of Active Listening and explain any two.</b></p> <p><b>Phases of Active Listening:</b></p> <ul style="list-style-type: none"> <li>• Receiving</li> <li>• Understanding</li> <li>• Remembering</li> <li>• Evaluating</li> <li>• Responding</li> </ul> <p><b>Explanation (any two):</b></p> <ul style="list-style-type: none"> <li>• <b>Receiving:</b> This is the first stage where the listener hears the message. It requires attention and avoiding distractions.</li> <li>• <b>Responding:</b> In this stage, the listener gives feedback through verbal or non-verbal responses. It shows that the message is understood.</li> </ul> <p><b>3. Why is the Data Understanding stage important in data analysis?</b><br/> The data understanding stage helps in analyzing the quality and structure of the data. It allows identification of patterns, errors, or missing values. This stage ensures that correct and meaningful analysis is performed.</p> | 3 |
|     | <p><b>4. Write any three advantages of Presentation software.</b></p> <ul style="list-style-type: none"> <li>• <b>Visual Representation:</b> Helps present information using images, charts, and graphs.</li> <li>• <b>Easy to Use:</b> User-friendly tools make creating presentations simple.</li> <li>• <b>Effective Communication:</b> Makes ideas clear and engaging for the audience.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
|     | <p align="center"><b>***** BEST OF LUCK *****</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |