



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 01

Class : XII A/B (SUBJECT-05)

Date :

Admission No.:

Duration : 1 Hr

Max. Marks : 25

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 and attempt any 7, carry 1 mark each. - Section B has 10 questions and attempt any 6, carry 2 marks each. - Section C has 4 questions and attempt any 2, carry 3 marks each.	
	Section-A	
	c. Google Colab b. Numerical Python a. Evaluating b. Being preoccupied c. Self-Awareness d. Obsessive-compulsive personality b. 100 a. Worksheet b. Identifying why a mobile phone company's sales dropped c. Regression	1
	Section - B	
	1. What is array in Python? An array in Python is a collection of elements of the same data type stored in a continuous memory location. It allows efficient storage and access of multiple values using a single variable. Arrays are commonly used for numerical operations and data processing.	2
	2. What is scalar value? A scalar value is a single data value such as an integer, float, or string. It is not a collection like a list or array. Scalars represent one unit of data at a time.	2

	3. What is communication? Communication is the process of exchanging information, ideas, or feelings between individuals. It can occur through speaking, writing, gestures, or visual methods. Effective communication helps in better understanding and relationship building. 4. Write two characteristics of active listeners. Active listeners pay full attention to the speaker without distractions. They also provide feedback by asking questions or responding appropriately. This helps in better understanding and effective communication. 5. Explain SMART goal. SMART goals are goals that are Specific, Measurable, Achievable, Relevant, and Time-bound. They help in setting clear and realistic objectives. Using SMART goals improves focus and increases the chances of success. 6. What is stress? Stress is a feeling of mental or emotional strain caused by challenging situations. It can affect both physical and mental health if not managed properly. Managing stress is important for maintaining overall well-being. 7. What is Workbook? A workbook is a file used in spreadsheet software that contains one or more worksheets. It is used to store and organize data in rows and columns. Users can perform calculations and analysis within a workbook. 8. What is function? A function is a set of instructions or a formula used to perform a specific task. In programming and spreadsheets, functions help automate calculations. They make work faster and more efficient. 9. What is Data collection? Data collection is the process of gathering information from various sources. This data is then used for analysis and decision-making. It is an important step in research and AI projects. 10. What is hypothesis testing? Hypothesis testing is a statistical method used to test assumptions about a dataset. It helps in determining whether a claim is true or false based on evidence. It is widely used in research and data analysis.	
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	Section - C	
	1. Define the following attributes of Pandas: a. df.shape <code>df.shape</code> returns the number of rows and columns in a DataFrame as a tuple (rows, columns). It helps users quickly understand the size of the dataset. For example, (100, 5) means 100 rows and 5 columns. b. df.head(n) <code>df.head(n)</code> displays the first <i>n</i> rows of the DataFrame. It is useful for quickly previewing the dataset. By default, it shows the first 5 rows if no value is given. c. df.tail(n) <code>df.tail(n)</code> shows the last <i>n</i> rows of the DataFrame. It helps in viewing the end portion of the dataset. By default, it displays the last 5 rows. 2. Write and explain any three barriers of active listening. • Distractions: External noise or internal thoughts can prevent a person from focusing on the speaker. This reduces understanding. • Prejudice or Bias: Forming opinions before listening can block proper understanding of the message. • Lack of Interest: If the listener is not interested, they may not pay attention, leading to poor communication. 3. Explain any three modules of the Data Science methodology. • Data Collection: In this stage, data is gathered from different sources. It is the first step for analysis. • Data Exploration: Data is analyzed and visualized to find patterns and insights. It helps in understanding the dataset. • Modeling: In this stage, algorithms are applied to build models. These models are used to make predictions or decisions. 4. Write any three advantages of Spreadsheet software. • Easy Calculations: Spreadsheets allow quick calculations using formulas and functions. • Data Organization: Data can be arranged in rows and columns for better understanding. • Data Analysis: Charts and graphs can be created to analyze and visualize data easily.	3
	***** BEST OF LUCK *****	