



# **B.K. BIRLA CENTRE FOR EDUCATION**

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

## **PRE MID-TERM EXAMINATION (2025-26) ARTIFICIAL INTELLIGENCE (843) / SUBJECT-05**

**Class : XII A/B/C**  
**Date : 02-08-2025**  
**Admission No.:**

**Duration : 60 mins**  
**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. It carries 1 mark each.
- Section B has 10 questions. It carries 2 marks each.
- Section C has 4 questions. It carries 3 marks each.

### **Section-A**

**(Answer any 7 out of 10 MCQs)**

1. Which technique does Generative AI commonly used to create content ? 1  
(a) Spreadsheets (b) Deep Learning and neural networks (c) Binary Coding  
(d) Data Compression
2. What type of AI model is ChatGPT ? 1  
(a) Large Language Model (b) Image recognition model (c) Data Analysis tool  
(d) Voice recognition system.
3. Which of the following models is often used for sequential data like speech or time series ? 1  
(a) Gaussian Mixture Models (GMM) (b) Decision Trees (c) Hidden Markov Models (HMM)  
(d) Support Vector Machines
4. Which of the following best describe the purpose of story telling ? 1  
(a) To teach cooking skills (b) To express emotions and share ideas.  
(c) To improve handwriting (d) To memorise historical dates
5. Which of the following is a key benefit of storytelling ? 1  
(a) Supports Psychological well-being (b) Encourages Ethical and Moral narrative.  
(c) Both a and b (d) None of these.
6. Which element in data storytelling connects data insights in a structured and engaging manner ? 1  
(a) Graph (b) Narrative (c) Infographic (d) Dataset

### **Fill in the blanks:**

7. VAE stands for \_\_\_\_\_. 1

8. \_\_\_\_\_ is Google's AI model that can generate text, answer questions, and assist with various tasks. 1
9. \_\_\_\_\_ refers to individual facts, statistics, or pieces of information, which may be numerical or categorical in nature. 1
10. High quality data ensures that the analysis is accurate, \_\_\_\_\_ and relevant to the audience. 1

**SECTION – B**  
**(Answer any 6 out of 10 Short Answer Questions)**

11. List three applications of text generation and explain each type. 2

**Assertion & Reasoning**

Direction: 12-15, consist of four statements – Assertion (A) and Reasoning (R). Answer these questions by selecting the appropriate option given below:

- (a) Both A and R are True, and R is the correction explanation of A.
- (b) Both A and R are True , but R is not the correction explanation of A.
- (c) A is true but R is false (d) A is false but R is true.

12. **Assertion (A):** Mistral AI's Mixtral 8x7B is a cost effective AI model designed for high performance with fewer resources. 2  
**Reason (R) :** Mixtral 8x7B is particularly effective in edge computing and mobile applications that require efficient AI processing.
13. **Assertion (A):** Speech-to-text models convert spoken language into written text, while text-to-speech models generate natural-sounding speech from written text. 2  
**Reason (R) :** Both Speech-to-text and text-to-speech models are designed to improve language translation accuracy.
14. **Assertion (A):** Freytag's Pyramid helps structure data stories by providing a clear framework for storytelling. 2  
**Reason (R) :** Freytag's Pyramid includes stages like introduction, rising action, climax, falling action and conclusion.
15. **Assertion (A):** Data visualization makes raw data easier to interpret and understand. 2  
**Reason (R) :** Line graphs and bar charts are the only tools used for data visualization.
16. Differential between Generative AI and Discriminative AI . 2
17. Explain the risks associated with LLMs. 2
18. How does data story telling improve the comprehension and impact of data insights ? 2
19. What simple pattern do most stories, including data stories, follow ? 2
20. List the elements of a Story and describe any two. 2

**SECTION – C**  
**(Answer any 2 out of 4 Long Answer Questions)**

**Competency-based questions:**

21. A travel agency “WanderWorld” is using generative AI to create engaging content for promoting vacation packages. The agency leverages AI models to generate captivating destination images, personalized travel itineraries, and interactive chatbots that provide travel tips and booking assistance. As part of their upcoming campaign, they plan to highlight eco-tourism destinations that promotes sustainable travel practices. The success of their campaign delivers visually appealing content while ensuring the information is accurate and engaging. 3
- a) What types of AI models can WanderWorld used to generate destination images and personalised travel itineraries ?
- b) Identify one challenge WanderWorld may face when using Generative AI to promote eco- tourism ?
- c) What is one advantage of using Generative AI for creating visually appealing travel content ?
22. Why does Large Language Models (LLMs) referred to as “Large”, and can you provide some examples of such models ? 3
23. An educational institute conducted a survey to gather feedback from students on online learning experiences during the COVID-19 pandemic. They collected data on internet connectivity issues, course content satisfaction, and overall learning effectiveness. Using this data, they created a data storytelling presentation to inform future decisions on online course delivery methods. 3
- What motivated the educational institution to conduct the survey and create the data storytelling presentation ?
- a. To analyse student enrollment trends.
- b. To assess campus infrastructure needs.
- c. To gather feedback on online learning experiences.
- d. To evaluate faculty performance in virtual classrooms.
24. How are the three essential elements of a data story – data, narrative, and visuals interlinked with each other ? 3

**\*\*\*\*\* BEST OF LUCK \*\*\*\*\***