



# B.K. BIRLA CENTRE FOR EDUCATION

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



## PERIODIC TEST II 2025-26

### ARTIFICIAL INTELLIGENCE – MARKING SCHEME (417)

Class : IX  
Date : 06/11/2025  
Admission No.:

Duration : 1 Hrs  
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 11 questions attempt 11 and carry 1 mark each.
- Section B has 6 questions attempt only 4 and carry 2 marks each.
- Section C has 4 questions attempt only 2 and carry 3 marks each.

#### **Section-A**

1. A business that provides intangible products like education, banking, or transport is called a: 1  
a) Trading business  
b) Manufacturing business  
c) Service business \*  
d) Production business
2. Who is known as an entrepreneur? 1  
a) A person who only works for others  
b) A person who starts and manages a business \*  
c) A government employee  
d) A salaried worker
3. The person who buys goods in bulk and sells them to retailers is known as a: 1  
a) Producer  
b) Wholesaler \*  
c) Entrepreneur  
d) Manufacturer
4. The main difference between a businessman and an entrepreneur is: 1  
a) Businessman copies ideas; entrepreneur innovates \*  
b) Entrepreneur copies ideas; businessman innovates  
c) Both are the same  
d) Entrepreneur avoids risks
5. Which of the following is an example of **conventional AI**? 1  
a) ChatGPT  
b) A rule-based chess program \*  
c) Runway ML  
d) Artbreeder

6. A generative model focuses on: 1
  - a) Sorting data
  - b) Generating new samples similar to training data \*
  - c) Deleting unnecessary data
  - d) Counting data entries
7. Which of the following is **not** a type of generative AI model? 1
  - a) Generative Adversarial Network (GAN)
  - b) Variational Autoencoder (VAE)
  - c) Decision Tree \*
  - d) Recurrent Neural Network (RNN)
8. The two parts of a GAN are: 1
  - a) Encoder and Decoder
  - b) Generator and Discriminator \*
  - c) Input and Output
  - d) Teacher and Student
9. What does an Autoencoder do? 1
  - a) It translates between languages
  - b) It learns to compress and then reconstruct input data \*
  - c) It deletes unwanted files
  - d) It labels data
10. A Recurrent Neural Network (RNN) is most useful for: 1
  - a) Images only
  - b) Sequential data like text or speech \*
  - c) Random data
  - d) Static numbers
11. Which of the following best describes the future impact of Generative AI? 1
  - a) It will completely replace humans
  - b) It will assist humans in creative and analytical work \*
  - c) It will make learning harder
  - d) It will only be used in games

### SECTION - B

12. What do you mean by “Feedback in the long run”? 2

Ans: Feedback in the long run: It is important to take feedback from the customers in the long run. You can use the feedback to improve your product and reach out to a larger group for future expansion of the business.
13. What do you think is the biggest challenge of an entrepreneur? 2

Ans: Feeling a large responsibility for the business may sometimes be scary and brings a lot of mental instability. Funds management, unpredictable market, employees’ reactions and sometimes less time for family may lead to emotional setback for an entrepreneur.
14. Write any four names of generative AI tools. 2

Ans: Example 1: GPT-3 (by OpenAI)  
Example 2: DALL-E (by OpenAI)  
Example 3: StyleGAN (by NVIDIA)  
Example 4: Artbreeder

- 15 Give two important feature of the popular tool Artbreeder. 2  
Ans: Feature 1: Allows users to blend and evolve images to create unique artworks.  
Feature 2: Provides sliders for users to adjust different attributes of images, such as age, gender, and art style.
- 16 Give two ethical considerations of using generative AI. 2  
Ans: Consideration 1: The potential for misuse in creating deepfakes, which can be used for malicious purposes such as misinformation, fraud, and invasion of privacy.  
Consideration 2: The need for transparency and accountability in the use of generative AI, ensuring that users are aware when they are interacting with AI-generated content.
- 17 Define Conventional AI. 2  
Ans: Conventional AI: Typically used for tasks such as classification, regression, prediction, and optimization. Examples include fraud detection, recommendation systems, and speech recognition.

### SECTION – C

- 18 A student develops an AI model using Recurrent Neural Networks (RNNs) to generate new song lyrics. 3
1. Why is RNN suitable for this type of task?
  2. How does sequential data help in the process?
  3. Give one other example of where RNNs are used.

Ans:

1. RNNs are ideal for sequential data such as text or music because they remember previous information to generate the next part.
  2. Sequential data helps the AI produce lyrics that follow rhythm and pattern.
  3. RNNs are used in language translation.
- 19 What are Autoencoders? Write any two features. 3  
Ans: Autoencoders (AEs) are neural networks that learn to compress data into a latent space and then reconstruct it. They are used for tasks like dimensionality reduction and feature learning. Key features include:
- Dimensionality Reduction: Compresses data to lower dimensions for easier visualization and reduced computational cost.
  - Data Denoising: Removes noise from data, improving quality.
  - Anomaly Detection: Identifies outliers by reconstructing normal data poorly.
  - Feature Learning: Learns useful features for tasks like classification.
- 20 Explain any three biasness in generative AI. 3  
Ans: Gender Bias: Generative AI models trained on biased datasets may produce stereotypes, such as associating certain professions with specific genders, as seen in some job-related content.  
Racial Bias: AI-generated images or content might depict certain races in stereotypical or limited ways, often reflecting biases present in the training data.  
Cultural Bias: Language models might generate content that is culturally insensitive or irrelevant to specific groups, influenced by the predominance of certain cultural perspectives in the data.

21 Riya is a digital artist who wants to create unique portraits by blending different art styles and faces using AI tools.

1. Suggest one Generative AI platform she can use.
2. Explain how this tool helps artists enhance their creativity.
3. Mention one possible ethical concern when using such a tool.

Ans:

1. Riya can use **Artbreeder**.
2. It allows artists to mix or “breed” different images to create new ones with unique styles, saving time and boosting creativity.
3. A possible ethical concern is that AI-generated art might unintentionally copy someone else’s style or work without permission.