



INDIAN SCHOOL AL WADI AL KABIR

Class: IX	Department: Computer Science
Worksheet No: 4	ARTIFICIAL INTELLIGENCE

Unit 4: Introduction to Generative AI

1. What is the primary definition of Generative AI?

- A) Algorithms that only analyze and classify existing data.
- **B) Algorithms that generate new data that resembles human-generated content.**
- C) Software that only identifies patterns in historical numerical data.
- D) Tools used exclusively for web scraping.

2. Which type of content can Generative AI produce?

- A) Audio and code.
- B) Images and text.
- C) Simulations and videos.
- **D) All of the above.**

3. In which learning style does a model take unlabelled datasets and figure out patterns without human intervention?

- A) Supervised Learning.
- **B) Unsupervised Learning.**
- C) Discriminative Modeling.
- D) Conventional AI Modeling.

4. What is the main difference between the "Goal" of conventional AI and Generative AI?

- A) Conventional AI creates content; Generative AI analyzes it.
- **B) Generative AI creates new content; conventional AI analyzes and classifies data.**
- C) There is no difference in their primary goals.
- D) Conventional AI produces unexpected results; Generative AI is predictable.

5. How does the output of Generative AI typically differ from Conventional AI?

- A) It is always based on binary classification.
- B) It is strictly predictable.
- **C) It is fresh, innovative, and often unexpected.**
- D) It is only used for banking and healthcare.

6. Generative Adversarial Networks (GANs) consist of which two neural networks?

- A) Primary and Secondary networks.
- **B) Generator and Discriminator networks.**
- C) Input and Output networks.
- D) Compression and Decompression networks.

7. In a GAN, what is the role of the Discriminator network?

- A) It produces the initial data.
- **B) It analyzes data and provides feedback to the generator.**
- C) It compresses the representation of data.
- D) It converts images from day to night.

8. Which generative model learns the distribution of data and then samples from it to produce fresh data?

- **A) VAEs (Variational Autoencoders).**
- B) RNNs.
- C) Conventional Classifiers.
- D) Linear Regression models.

9. Which model is specifically designed to handle sequential data like music or text?

- A) GANs.
- B) Autoencoders.
- **C) RNNs (Recurrent Neural Networks).**
- D) Discriminative models.

10. How do Autoencoders function during the data restoration process?

- A) By generating random patterns.
- B) By scraping data from websites.
- **C) By compressing data first, then decompressing it to its original form.**
- D) By predicting only the next character in a sequence.

11. Which tool is used to generate new images by combining different GAN models?

- A) ChatGPT.
- B) Runway ML.
- **C) Artbreeder.**
- D) AIVA.

12. "The Next Rembrandt" project is an example of Generative AI in which field?

- **A) Art.**
- B) Music.

- C) Drug Discovery.
- D) Coding.

13. AIVA is an AI composer used to create original music pieces. This is an application of AI in:

- A) Language.
- B) **Music.**
- C) Computer Vision.
- D) Architecture.

14. According to the Generative AI timeline, in which year was ChatGPT released?

- A) 2020.
- B) 2021.
- C) **2022.**
- D) 2023.

15. Which AI tool, developed by Google, was released/updated in 2023 as shown in the timeline?

- A) GPT-4.
- B) Midjourney.
- C) **Gemini (formerly Google Bard).**
- D) Adobe Firefly.

16. Which benefit of Generative AI involves optimizing complex systems, such as designing new drugs?

- A) Creativity.
- B) **Exploration.**
- C) Scalability.
- D) Personalization.

17. What does "Accessibility" mean in the context of Generative AI benefits?

- A) Making models more expensive to run.
- B) Limiting the use of AI to experts only.
- C) **Democratizing access to content creation tools for people with limited technical expertise.**
- D) Restricting data to government portals only.

18. A major limitation of Generative AI is its "Computational Demands." This means it requires:

- A) No internet access.
- B) **Significant computational resources that can be expensive.**
- C) Only one neural network to function.
- D) Human intervention at every single step.

19. What is a potential drawback of "Uncertainty" in Generative AI?

- A) It always produces the same result.
- B) **It can produce unexpected and often unpredictable results.**

- C) It cannot be used for creative fields.
- D) It never requires training data.

20. Generative AI can replicate and amplify _____ present in the training data.

- A) Accuracy.
- **B) Data Bias.**
- C) Efficiency.
- D) Scalability.

21. The use of Generative AI to create fake news or manipulate public opinion is referred to as:

- A) Data Exploration.
- B) Human Agency.
- **C) Misinformation.**
- D) Data Preprocessing.

22. Which ethical concern arises when it becomes hard to distinguish between content generated by humans versus machines?

- A) Data Bias.
- **B) Human Agency and Control.**
- C) Computational Demands.
- D) Accessibility.

23. "Ownership" issues in Generative AI are particularly relevant in which fields?

- A) Banking and Healthcare.
- **B) Music, literature, and art.**
- C) Weather forecasting and sports.
- D) Data security and privacy.

24. To ensure the "Responsible Use" of Generative AI, developers should ensure that training data is:

- A) Collected without consent.
- B) Restricted to a single population group.
- **C) Diverse and representative.**
- D) Only obtained through web scraping.

25. Generative AI has the potential to generate sensitive personal info (e.g., credit card numbers) for malicious use. This is a violation of:

- A) Efficiency.
- B) Exploration.
- **C) Privacy.**
- D) Scalability.