Unit – 1

1. What is Generative AI?

a. A type of supervised learning
b. An algorithm that generates random numbers
c. An AI model that creates new data similar to the input data
d. A form of reinforcement learning

Answer: c. An AI model that creates new data similar to the input data

2. Which of the following is a type of Generative AI model?

a. Decision Tree
b. Support Vector Machine
c. GAN (Generative Adversarial Network)
d. K-means clustering

Answer: c. GAN (Generative Adversarial Network)

3. In the context of Generative AI, what does the term "Generative" mean?

a. Creating new content
b. Generalizing data
c. Generating income
d. Generating code

Answer: a. Creating new content

4. What is the primary purpose of Generative AI models?

a. Classifying data
b. Predicting outcomes
c. Generating new data
d. Optimizing algorithms

Answer: c. Generating new data

5. Which phase is part of the Lifecycle of a Generative AI project?

a. Feature extraction
b. Model training
c. Hyperparameter tuning
d. All of the above

Answer: d. All of the above

6. How does Generative AI work in the context of creating new images?

a. By copying existing images
b. By combining elements of different images
c. By resizing images
d. By applying filters to images

Answer: b. By combining elements of different images

7. In which of the following areas can Generative AI be applied?

a. Image synthesis
b. Text generation
c. Music composition
d. All of the above

Answer: d. All of the above

8. How does Generative AI contribute to software applications?

a. Enhancing user interfaces
b. Automatically fixing bugs
c. Generating code snippets
d. All of the above

Answer: d. All of the above

9. What role does Generative AI play in Business and Society?

a. Enhancing creativity and innovation
b. Automating routine tasks
c. Personalizing user experiences
d. All of the above

Answer: d. All of the above

10. What distinguishes Generative Pre-trained Transformers (GPTs) from search engines?

a. GPTs use machine learning algorithms
b. Search engines rely on pre-existing databases
c. GPTs generate content on the fly based on context
d. Search engines only retrieve stored information

Answer: c. GPTs generate content on the fly based on context

11. What is a potential ethical concern related to Generative AI?

a. Lack of interpretability
b. Overfitting
c. Underfitting
d. Model accuracy

Answer: a. Lack of interpretability

12. How can responsible AI practices be implemented in Generative AI projects?

a. Ensuring transparency in model decisions
b. Regularly updating and monitoring models
c. Incorporating fairness and bias considerations
d. All of the above

Answer: d. All of the above

13. What is the primary goal of a Generative Adversarial Network (GAN)?

a. Image classification
b. Generating realistic data
c. Reinforcement learning
d. Regression analysis

Answer: b. Generating realistic data

14. Which phase of a Generative AI project involves selecting the appropriate model architecture? a. Data preprocessing
b. Model training

c. Model selection
d. Model deployment

Answer: c. Model selection

15. How does Generative AI contribute to natural language processing tasks? a. Translating languages
b. Summarizing text
c. Generating human-like text
d. All of the above

Answer: d. All of the above

16. What is a potential societal impact of widespread use of Generative AI in content creation? a. Increased job opportunities
b. Copyright and plagiarism challenges
c. Enhanced education systems
d. Reduced digital divide

Answer: b. Copyright and plagiarism challenges

17. In Gen AI, what is the significance of hyperparameter tuning? a. Adjusting model parameters for better performance
b. Determining the number of layers in a neural network
c. Selecting features from the input data
d. Generating synthetic data

Answer: a. Adjusting model parameters for better performance

18. How does Generative AI impact the concept of data privacy? a. Enhancing data security
b. Introducing new privacy risks
c. Reducing the need for data privacy
d. Improving data transparency

Answer: b. Introducing new privacy risks

19. What distinguishes Generative AI from traditional rule-based systems? a. Generative AI requires labeled data for training
b. Generative AI learns patterns and generates new content

c. Rule-based systems rely on explicit programming
d. Rule-based systems are only suitable for classification tasks

Answer: b. Generative AI learns patterns and generates new content

20. How can businesses ensure the responsible use of Generative AI in their operations? a. Regularly updating AI models
b. Implementing ethical guidelines
c. Providing transparency in AI decision-making
d. All of the above

Answer: d. All of the above

Unit – 2

1. **What is Prompt Engineering in the context of computing?**
    - a. Writing code for software applications
    - b. Designing user interfaces
    - c. Crafting effective prompts for language models
    - d. Debugging algorithms
    - **Answer: c. Crafting effective prompts for language models**
2. **What does the ACHIEVE framework aim to achieve in prompt engineering?**
    - a. Developing new software frameworks
    - b. Enhancing the performance of language models
    - c. Designing efficient algorithms
    - d. Streamlining user interface design
    - **Answer: b. Enhancing the performance of language models**
3. **In the context of Large Language Models, what is a fundamental aspect of prompt usage?**
    - a. The length of the prompt doesn't matter
    - b. Crafting prompts is irrelevant for model performance
    - c. The choice of words and structure in the prompt matters
    - d. Prompts are only necessary for text generation tasks
    - **Answer: c. The choice of words and structure in the prompt matters**
4. **What is the primary goal of prompt tuning?**
    - a. Adjusting the volume of prompts used
    - b. Fine-tuning language models based on prompts
    - c. Deleting irrelevant prompts from the dataset
    - d. Ignoring prompts in the training process
    - **Answer: b. Fine-tuning language models based on prompts**
5. **Which pattern in Prompt Pattern I focuses on refining a question to improve model comprehension?**
    - a. Cognitive Verifier Pattern
    - b. Audience Persona Pattern
    - c. Flipped Interaction Pattern
    - d. Question Refinement Pattern
    - **Answer: d. Question Refinement Pattern**
6. **How does the Cognitive Verifier Pattern contribute to prompt engineering?**
    - a. It verifies the cognitive abilities of the user
    - b. It checks the correctness of the prompt

- c. It ensures that the prompt aligns with the user's mental model
- d. It validates the prompt against a pre-defined set of rules
- **Answer: c. It ensures that the prompt aligns with the user's mental model**

7. **In the Audience Persona Pattern, what aspect of the audience does it focus on?**
    - a. Age and gender of the audience
    - b. Personal preferences and interests
    - c. Cultural background and language proficiency
    - d. All of the above
    - **Answer: d. All of the above**
8. **What is the key idea behind the Flipped Interaction Pattern in prompt engineering?**
    - a. Inverting the traditional user interaction flow
    - b. Ignoring user input in the interaction
    - c. Reversing the order of prompt and model response
    - d. Using random prompts for model training
    - **Answer: c. Reversing the order of prompt and model response**
9. **Which aspect of prompt engineering does the ACHIEVE framework address?**
    - a. Prompt patterns
    - b. Prompt tuning
    - c. Both a and b
    - d. None of the above
    - **Answer: c. Both a and b**
10. **How does question refinement contribute to effective prompt usage?**
    - a. It makes prompts longer for better context
    - b. It narrows down the focus and clarity of prompts
    - c. It is irrelevant to prompt engineering
    - d. It decreases the accuracy of language models
    - **Answer: b. It narrows down the focus and clarity of prompts**
11. **In prompt engineering, what role does the audience persona play?**
    - a. It defines the characteristics of the language model
    - b. It helps in understanding the target audience for prompts
    - c. It is a type of language model architecture
    - d. It is irrelevant to prompt engineering
    - **Answer: b. It helps in understanding the target audience for prompts**

12. **How does the flipped interaction pattern impact user engagement?**
    - a. It has no impact on user engagement
    - b. It enhances user engagement by providing unexpected responses
    - c. It decreases user engagement by confusing users
    - d. It is only applicable to prompt generation, not user interaction
    - **Answer: b. It enhances user engagement by providing unexpected responses**
13. **Which pattern is focused on aligning prompts with the cognitive abilities of the user?**
    - a. Cognitive Verifier Pattern
    - b. Audience Persona Pattern
    - c. Flipped Interaction Pattern
    - d. Question Refinement Pattern
    - **Answer: a. Cognitive Verifier Pattern**
14. **How can prompt tuning contribute to overcoming biases in language models?**
    - a. By ignoring certain prompts that introduce biases
    - b. By fine-tuning models to be more sensitive to biased prompts
    - c. By avoiding prompt engineering altogether
    - d. By using only pre-defined prompts
    - **Answer: a. By ignoring certain prompts that introduce biases**
15. **What is the significance of the question refinement pattern in prompt engineering?**
    - a. It helps in creating complex and convoluted prompts
    - b. It simplifies and clarifies prompts for better understanding
    - c. It focuses on using a single prompt for all scenarios
    - d. It is only applicable to specific types of language models
    - **Answer: b. It simplifies and clarifies prompts for better understanding**
16. **How does the ACHIEVE framework contribute to the effectiveness of prompt engineering?**
    - a. By introducing new programming languages for prompt generation
    - b. By providing a systematic approach to prompt design and tuning
    - c. By eliminating the need for prompt patterns
    - d. By automating the entire prompt engineering process
    - **Answer: b. By providing a systematic approach to prompt design and tuning**
17. **What is the primary objective of the cognitive verifier pattern in prompt engineering?**

- a. To validate the accuracy of prompts
- b. To ensure prompts align with the user's cognitive abilities
- c. To identify and eliminate biased prompts
- d. To automate the process of prompt generation
- **Answer: b. To ensure prompts align with the user's cognitive abilities**

18. **How does prompt engineering impact the performance of language models?**
    - a. It has no effect on model performance
    - b. It enhances model performance by providing better inputs
    - c. It decreases model performance by introducing noise
    - d. It only impacts the training time of models
    - **Answer: b. It enhances model performance by providing better inputs**
19. **What is the role of prompt patterns in effective prompt engineering?**
    - a. To restrict the variety of prompts used
    - b. To guide the design and usage of prompts
    - c. To eliminate the need for prompt tuning
    - d. To automate the prompt generation process
    - **Answer: b. To guide the design and usage of prompts**
20. **How can the flipped interaction pattern enhance user experience in prompt-based applications?**
    - a. By providing predictable responses
    - b. By introducing delays in model responses
    - c. By creating unexpected and engaging interactions
    - d. By ignoring user prompts
    - **Answer: c. By creating unexpected and engaging interactions**