INT426 (Gen AI) CA1 Set 3

### Introduction to Generative AI (CO1):

#### Bloom Level 1:

1. What is the primary objective of generative AI models?

a. Classification

b. Imitating human-like creativity

c. Regression

d. Data visualization

### Prompt Engineering (CO2):

#### Bloom Level 2:

2. In the context of prompt engineering, what does LLM stand for?

a. Large Language Model

b. Learning Language Mechanism

c. Linguistic Learning Model

d. Logical Language Matrix

3. How does a generative model differ from a discriminative model?

a. Generative models predict probabilities directly

b. Discriminative models learn the conditional probability of the output given the input

c. Generative models focus on feature extraction

d. Discriminative models imitate human-like creativity

4. What is the importance of understanding the foundations of generative models in AI?

a. To focus solely on discriminative models

b. To avoid prompt engineering

c. To enhance creativity in language models

d. To develop a comprehensive understanding of AI techniques

#### Bloom Level 4:

5. Explain the concept of prompt engineering and its role in language models.

a. Generating random prompts for training

b. Crafting specific inputs to influence model outputs

c. Ignoring the input prompts for better outcomes

d. Using pre-trained models without prompts

6. What are some key considerations when refining prompts for language models?

a. Complexity and length of the prompt

b. Ignoring the prompt context

c. Using generic prompts for all tasks

d. Focusing solely on grammatical correctness

7. How can prompt engineering impact the ethical use of language models?

a. It has no impact on ethics

b. It can introduce biases in model outputs

c. It reduces model creativity

d. It improves model interpretability

8. Discuss one practical experience in prompt engineering that enhances language model performance.

a. Using random prompts

b. Ignoring prompt context

c. Iteratively refining prompts based on model responses

d. Not considering prompt relevance

#### Bloom Level 5:

9. Analyze the ethical implications of prompt engineering in the context of language models.

a. Ethical concerns do not apply to prompt engineering

b. Prompt engineering can introduce biases and reinforce stereotypes

c. There are no ethical considerations in language model development

d. Prompt engineering only focuses on technical aspects

10. Evaluate the impact of prompt engineering on the adaptability of language models across different domains.

a. Prompt engineering has no impact on model adaptability

b. Carefully crafted prompts enhance adaptability

c. Using generic prompts is sufficient for adaptability

d. Adaptability is not a concern in language models

11. How can prompt engineering contribute to the interpretability of language models?

a. It has no impact on interpretability

b. Well-crafted prompts can provide insights into model decision-making

c. Interpretability is not relevant to language models

d. Ignoring prompts improves interpretability

12. Critique the statement: "Prompt engineering is only relevant for natural language processing tasks and not for other AI applications."

a. True statement

b. False statement

c. Partially true statement

d. Depends on the specific language model

### Additional Questions:

#### Bloom Level 2:

13. What is the primary difference between generative AI and discriminative AI?

a. Generative AI focuses on creativity, while discriminative AI focuses on decision boundaries.

b. Discriminative AI focuses on creativity, while generative AI focuses on decision boundaries.

c. Both generative and discriminative AI are identical in their objectives.

d. Generative AI only works with labeled data, whereas discriminative AI works with unlabeled data.

#### Bloom Level 4:

14. How does understanding the principles behind generative models contribute to the development of novel AI applications?

a. It is irrelevant to the development of AI applications.

b. Understanding generative models aids in designing innovative and creative AI solutions.

c. It complicates the AI development process.

d. It limits the potential applications of AI.

15. Discuss one challenge associated with prompt engineering and propose a potential solution.

a. Challenge: Lack of diversity in prompts; Solution: Using a diverse set of prompts during training.

b. Challenge: Ignoring prompt context; Solution: Ignoring diversity and sticking to a single prompt.

c. Challenge: Using overly complex prompts; Solution: Increasing the complexity for better results.

d. Challenge: Random prompt generation; Solution: Relying solely on random prompts for training.

### Cumulative Answer Key:

1. b

2. a

3. b

4. d

5. b

6. a

7. b

8. c

9. b

10. b

11. b

12. b

13. a

14. b

15. a