Question 1

Which of the following is a challenge in developing an emotional virtual agent?

A. Accuracy
B. Real-time processing
C. Privacy Concerns
D. All of the above

Question 2

Which of the following is a suitable reason why an Emotional Virtual Agent (EVA) should support multiple languages?

A. To limit the number of users who can interact with the EVA
B. To increase the cost of development
C. To enable a wider range of users to access emotional support
D. To increase the workload of the developers

Question 3

What should an Emotional Virtual Agent base its appropriate response on?

A. Intent and emotion
B. Emotion and context
C. Intent and context
D. A mix of intent, emotion, and context

Question 4

Which of the following is the best way to prevent privacy concerns related to emotional virtual agents?

1. **Providing users with a generic privacy policy without mentioning the specific data being collected by the agent.**
2. **Obtaining users' consent before collecting personal data and clearly stating the purpose of the data collection.**
3. **Using encryption techniques to secure the personal data collected by the agent.**
4. **Selling users' personal data to third-party companies for safe backup.**

A. 1 and 2
B. 2 and 3
C. 3 and 4
D. 1,2 and 3

Question 5

An emotional virtual agent is designed to provide emotional support to people with mental health conditions. However, it leads to negative consequences when the virtual agent is discontinued. What ethical concern is highlighted in this scenario?

A. Dependence on the virtual assistant
B. Discrimination against certain groups
C. Invasion of privacy
D. Biased emotional responses

Question 6

Virtual agents may display discrimination against certain groups of people due to the possibility of their emotional responses being influenced by bias or prejudice.

A. True
B. False

Question 7

To prevent overfitting, the number of features used should be balanced with the complexity of the model.

A. True
B. False

Question 8

The speech emotion detection and virtual assistant components should be able to work in real-time or close to real-time.

A. True
B. False

Question 9

An emotional virtual personal assistant powered by machine learning that has been trained on south indian languages and dialects would be able to translate well for north indian users.

A. True
B. False

Question 10

Which of the following is true about a virtual personal assistant system?

A. It should protect both personal and emotional information.
B. It should protect personal information but not emotional information.
C. It should protect emotional information but not personal information.
D. It should not protect either personal or emotional information.

Question 11

Which of the following component is usually not associated with virtual assistants?

A. Dialogue management system
B. Emotion sensing module
C. Human Activity detection module
D. Automatic Speech Recognition

Question 12

Select the correct sequence w.r.t end to end life cycle of a virtual assistant system.

A. Prepare data → Model → Monitor → Retrain → Deploy → Register
B. Prepare data → Model → Register → Monitor → Deploy → Retrain
C. Prepare data → Model → Register → Deploy → Monitor → Retrain
D. Prepare data → Register → Monitor → Model → Retrain →Deploy

Question 13

Which of the following is not a dataset for emotional speech recognition?

A. EmoDB
B. RAVDESS
C. LibriSpeech
D. IITKGP-SESC

Question 14

What does a model registry allow for in the deployment of machine learning models?

a) Real-time processing and response

b) Tracking different versions of the model

c) Model training and optimization

d) Data encryption and privacy compliance

Question 15

What is one of the challenges associated with multi-language support in emotionally intelligent virtual assistants?

a) Bias and discrimination

b) Limited availability of emotional data

c) Consistency in emotional expressions across cultures

d) Operational requirements for real-time processing

Question 16

How can cultural diversity impact the effectiveness of emotionally intelligent virtual agents?

a) It ensures uniformity and consistency in user experiences

b) It enables adaptation to different cultural norms and preferences

c) It leads to bias and discrimination in data collection and processing

d) It restricts access to emotional support services for certain cultural groups

Question 17

How does emotional manipulation pose an ethical challenge in the context of emotionally intelligent virtual agents?

a) It enhances user experience and engagement

b) It may influence users' emotions and behaviors without their knowledge or consent

c) It fosters emotional well-being and mental health support

d) It increases user dependency and reliance on technology

Question 18

_____ is a legal concern associated with emotional virtual agents.

A. Social Isolation
B. Unintended consequences
C. Liability and accountability
D. Privacy

Question 19

Anthropomorphism may lead to deception.

A. True
B. False

Question 20

Identify the ethical concern associated.

A healthcare organization integrates an emotional virtual therapist into its mental health support services for patients. If the virtual therapist provides inaccurate or harmful advice, leading to adverse outcomes or exacerbating mental health conditions.

A. Bias and Discrimination
B. Liability and Accountability
C. Deceptive Practices
D. Data Protection

Question 21

Identify the ethical concern associated.

A virtual assistant in an e-commerce app analyzes a user's emotional state based on their browsing history and interactions. If the assistant detects frustration or impatience, it may subtly influence the user's emotions by displaying persuasive messages or offers to encourage immediate purchases, potentially exploiting vulnerable emotional states for commercial gain.

A. Deception
B. Vulnerability
C. Financial Fraud
D. Emotion Manipulation

Question 22

Identify the potential ethical concern.

An elderly individual living alone becomes emotionally attached to a virtual companion robot, spending most of their time interacting with the robot for companionship and emotional support. As a result, the individual gradually withdraws from social interactions with family and friends.

A. Privacy invasion
B. Bias
C. Social isolation
D. Liability

Question 23

A mental health support chatbot collects detailed information about users' emotions, behaviors, and psychological concerns. What potential ethical concern can arise in this scenario?

A. Social image
B. Privacy
C. Discrimination
D. Dependence on EVA

1) One potential application of using an agent in customer service is to provide a more personalized and empathetic experience to customers by recognizing their emotions during interactions. ***1 point***

- (●) True
- ( ) False

2) Which of the following are the challenges faced by emotional virtual personnel assistance? ***1 point***

- ( ) Ensuring the accuracy of emotion prediction.
- ( ) Facilitating real-time emotion prediction.
- (●) Both a and b
- ( ) None of the above

3) Virtual assistants may be biased towards the training data, which may potentially lead to the unfair treatment of certain groups. ***1 point***

- (●) True
- ( ) False

4) Which of the following is an ethical concern that is not associated with virtual assistants? ***1 point***

- ( ) Privacy concerns
- ( ) Emotional Manipulation
- ( ) Bias and Discrimination
- (●) None of the above

5) Emotional virtual agents may be designed to appear as if they have emotions but in reality they are just algorithms. ***1 point***

- (●) True
- ( ) False

6) The process of transferring emotions to robots is non-trivial because robots do not express emotions in the same manner as humans. ***1 point***

- (●) True
- ( ) False

7) Copy-pasting human expressions onto robots guarantees seamless translation of emotions. ***1 point***

- ( ) True
- (●) False

8) Emotional virtual agents might lead to social isolation. ***1 point***

- (●) True
- ( ) False

9) Linear discriminative analysis is a generative algorithm which can be applied to recognize emotions? ***1 point***

- ( ) True
- (●) False

10) During the preprocessing of emotional data, Normalizing data from different users enables fair comparison across them. ***1 point***

- (●) True
- ( ) False