Chapter-9
AI Around Us

Part A: Fill in the Blanks

1. Alexa uses _____ to interpret voice commands and convert them into text commands.

2. Smart Doorbells use _____ to enhance home security and convenience.

3. Self-driving vehicles rely on _____ to perceive their environment and make driving decisions.

4. Face detection involves identifying facial features such as _____, nose, and mouth.

5. Chatbots use _____ to understand and respond to user inputs.

6. Google Maps helps users find locations, get directions, and explore areas _____.

7. The _____ level of autonomy in self-driving vehicles requires no human intervention.

8. Face detection is used in _____ for unlocking devices and authenticating users.

9. _____ chatbots use predefined rules and scripts to respond to specific inputs.

10. Google Maps can be accessed by typing _____ in the address bar.

Part B: True or False

1. Alexa can only be used with Amazon Echo devices. (True/False)

2. Smart Doorbells can send live video feeds to homeowners. (True/False)

3. Self-driving vehicles at Level 5 autonomy require human intervention.

   (True/False)

4. Face detection is only used in security and surveillance. (True/False)

5. Chatbots can handle multiple conversations simultaneously. (True/False)

6. Google Maps provides real-time traffic updates. (True/False)

7. AI-powered chatbots can learn from interactions and improve over time.

   (True/False)

8. Face detection algorithms are not affected by lighting conditions. (True/False)

9. Rule-based chatbots are more flexible than AI-powered chatbots. (True/False)

10. Google Maps can only be used on mobile devices. (True/False)

Multiple Choice Questions

1. What technology does Alexa use to interpret voice commands?

   a) Machine Learning

   b) Natural Language Processing (NLP)

   c) Computer Vision

   d) Deep Learning

2. Which of the following is NOT a component of self-driving vehicles?

   a) Sensors and Cameras

b) Radar and Lidar

c) AI Algorithms

d) Manual Steering Wheel

3. What is the primary function of face detection in smartphones?

   a) Playing music

   b) Unlocking devices

   c) Sending messages

   d) Making phone calls

4. Which type of chatbot uses predefined rules and scripts?

   a) AI-Powered Chatbots

   b) Rule-Based Chatbots

   c) Hybrid Chatbots

   d) None of the above

5. What does Level 5 autonomy in self-driving vehicles mean?

   a) The vehicle requires constant human intervention.

   b) The vehicle can operate independently in most situations.

   c) The vehicle is capable of all driving functions without any human input.

   d) The vehicle can only drive on highways.

6. Which of the following is a challenge in face detection?

   a) Variability in lighting

   b) High cost

c) Limited applications

d) Easy detection of occlusions

7. What is the main advantage of using chatbots in customer service?

   a) They can only handle one conversation at a time.

   b) They are available 24/7.

   c) They require human intervention for every query.

   d) They are expensive to maintain.

8. How can you access Google Maps on a computer?

   a) By downloading it from the app store

   b) By typing google.com/maps in the address bar

   c) By calling a customer service number

   d) By sending an email to Google

9. Which AI technique is commonly used in face detection?

   a) Tokenization

   b) Haar cascades

   c) Entity Recognition

   d) Intent Recognition

10. What is the primary use of Google Maps?

    a) Playing games

    b) Finding locations and getting directions

    c) Sending emails

    d) Making phone calls