

19CET308- UNIT III

1. VR Devices

Q1. Which of the following is a popular VR device?

- a) Microsoft HoloLens
- b) Oculus Rift
- c) Google Glass
- d) Snapchat Spectacles

Answer: b) Oculus Rift

Q2. What is the function of VR devices?

- a) To completely replace the real-world environment with a virtual one
- b) To enhance reality with digital overlays
- c) To only track eye movements
- d) To provide high-resolution 2D displays

Answer: a) To completely replace the real-world environment with a virtual one

Q3. Which of the following is NOT a VR headset?

- a) HTC Vive
- b) Samsung Odyssey
- c) Google Glass
- d) Oculus Quest

Answer: c) Google Glass

2. Structure and Working of VR Devices

Q4. The HTC Vive uses which type of tracking system?

- a) Magnetic tracking
- b) Outside-in tracking with base stations
- c) GPS tracking
- d) Neural tracking

Answer: b) Outside-in tracking with base stations

Q5. Which technology is used in Google Cardboard to create a VR experience?

- a) Dedicated built-in display
- b) Smartphone-based display
- c) Projector-based display
- d) Holographic display

Answer: b) Smartphone-based display

Q6. The Samsung Gear VR requires which type of device to function?

- a) A gaming console
- b) A high-end PC
- c) A smartphone
- d) A VR-ready TV

Answer: c) A smartphone

Q7. What is a unique feature of the **Oculus Quest** compared to other VR headsets?

- a) It requires a powerful gaming PC
 - b) It is a standalone VR headset with inside-out tracking
 - c) It does not support 3D interactions
 - d) It only supports 2D videos
- Answer:** b) It is a standalone VR headset with inside-out tracking

3. AR Components

Q8. What is the **scene generator** in an AR system responsible for?

- a) Generating virtual environments in real-time
 - b) Tracking the position of the user
 - c) Managing network connections
 - d) Displaying only 2D images
- Answer:** a) Generating virtual environments in real-time

Q9. What is the primary function of a **tracking system** in AR?

- a) Enhancing color quality in displays
 - b) Determining the position and orientation of objects
 - c) Improving the sound quality of AR applications
 - d) Increasing the storage capacity of AR devices
- Answer:** b) Determining the position and orientation of objects

Q10. Which of the following is NOT a common AR tracking method?

- a) Marker-based tracking
 - b) GPS-based tracking
 - c) Sound-based tracking
 - d) SLAM (Simultaneous Localization and Mapping)
- Answer:** c) Sound-based tracking

4. Monitoring System and Display Technologies

Q11. What is the role of the **monitoring system** in AR?

- a) To track the movement of the user and surrounding environment
 - b) To provide network connectivity
 - c) To store AR application data
 - d) To create sound effects for AR applications
- Answer:** a) To track the movement of the user and surrounding environment

Q12. Which of the following is an **optical see-through HMD** used in AR?

- a) HTC Vive
 - b) Microsoft HoloLens
 - c) Oculus Rift
 - d) PlayStation VR
- Answer:** b) Microsoft HoloLens

Q13. What is the key advantage of **optical see-through HMDs**?

- a) They allow users to see the real world with digital overlays

- b) They provide full immersion in a virtual environment
- c) They require high-end gaming PCs
- d) They do not require tracking systems

Answer: a) They allow users to see the real world with digital overlays

Q14. What is a **virtual retinal system** in AR?

- a) A display technology that projects images directly onto the retina
- b) A device used to scan retinas for security purposes
- c) A system that tracks user emotions in AR applications
- d) A method for generating 3D sound in AR environments

Answer: a) A display technology that projects images directly onto the retina

Q15. Which type of AR display projects digital content onto surfaces without requiring a headset?

- a) Optical see-through HMD
- b) Monitor-based system
- c) Projection display
- d) Video see-through system

Answer: c) Projection display

5. Advantages and Disadvantages of AR and VR Technologies

Q16. Which of the following is a key **advantage of VR**?

- a) It allows full immersion in a virtual environment
- b) It can only be used in medical applications
- c) It does not require any external hardware
- d) It has no impact on gaming

Answer: a) It allows full immersion in a virtual environment

Q17. One major disadvantage of **VR technology** is:

- a) It provides an enhanced real-world experience
- b) It can cause motion sickness in some users
- c) It does not require a display
- d) It has no impact on the gaming industry

Answer: b) It can cause motion sickness in some users

Q18. What is a key **advantage of AR** over VR?

- a) AR enhances the real world instead of replacing it
- b) AR provides a completely immersive experience
- c) AR eliminates the need for tracking systems
- d) AR does not require any computational processing

Answer: a) AR enhances the real world instead of replacing it

Q19. Which of the following is a **disadvantage of AR**?

- a) It completely blocks the real-world environment
- b) It requires high computational power for real-time processing

- c) It is only used for entertainment purposes
- d) It does not support interactive elements

Answer: b) It requires high computational power for real-time processing

Q20. In which field is **VR technology** commonly used?

- a) Medicine and surgery simulations
- b) Virtual tourism
- c) Gaming and entertainment
- d) All of the above

Answer: d) All of the above