1. Human Factors
Q1. What is the main purpose of studying **human factors** in VR and AR development?
a) To improve the hardware design only
b) To enhance user experience and interaction
c) To make VR systems more expensive
d) To reduce the size of VR headsets
✅ **Answer:** b) To enhance user experience and interaction

Q2. Which human sense is primarily responsible for **depth perception** in a VR environment?
a) Hearing
b) Touch
c) Vision
d) Smell
✅ **Answer:** c) Vision

Q3. The **ear** plays a crucial role in VR systems for:
a) Enhancing hand tracking
b) Spatial audio perception
c) Generating 3D objects
d) Rendering high-resolution textures
✅ **Answer:** b) Spatial audio perception

Q4. What are **somatic senses** responsible for in VR interactions?
a) Recognizing virtual objects
b) Tracking body movements
c) Detecting physical sensations like touch and temperature
d) Enhancing audio feedback
✅ **Answer:** c) Detecting physical sensations like touch and temperature

2. Hardware Components
Q5. Sensor hardware in VR is primarily used for:
a) Improving internet connectivity
b) Tracking user movement and interactions
c) Reducing screen resolution
d) Storing large amounts of game data
✅ **Answer:** b) Tracking user movement and interactions

Q6. Head-coupled displays in VR refer to:
a) A display that moves according to the user's head movement
b) A stationary display screen
c) A display used only for sound processing
d) A device that projects VR images onto walls
✅ **Answer:** a) A display that moves according to the user's head movement

Q7. Which of the following is an example of **acoustic hardware** in VR systems?
a) VR controllers
b) Headphones with spatial audio
c) Graphics rendering unit
d) Eye-tracking sensors
✅ **Answer:** b) Headphones with spatial audio

Q8. What is the **primary role of integrated VR systems**?
a) To combine multiple VR components for a seamless experience
b) To develop 2D game environments
c) To replace AR technology
d) To eliminate the need for motion tracking
✅ **Answer:** a) To combine multiple VR components for a seamless experience

3. Software Components
Q9. Modeling a virtual world in VR software involves:
a) Designing and simulating 3D environments
b) Increasing the refresh rate of displays
c) Reducing the file size of VR applications
d) Adding more pixels to an image
✅ **Answer:** a) Designing and simulating 3D environments

Q10. Physical simulation in VR software is used for:
a) Making objects behave realistically in virtual environments
b) Enhancing sound effects
c) Displaying 2D images on VR screens
d) Removing user interaction from the system
✅ **Answer:** a) Making objects behave realistically in virtual environments

Q11. What is the primary purpose of **VR toolkits**?
a) To provide a collection of software tools for VR development
b) To increase battery life in VR headsets
c) To reduce the weight of VR hardware
d) To create AR experiences only
✅ **Answer:** a) To provide a collection of software tools for VR development

Q12. VRML (Virtual Reality Modeling Language) is used for:
a) Creating and representing 3D interactive worlds on the web
b) Enhancing the speed of VR hardware
c) Reducing network bandwidth usage
d) Storing user preferences in VR applications
✅ **Answer:** a) Creating and representing 3D interactive worlds on the web

Q13. Which of the following is a **key advantage of VRML**?
a) It allows users to create 3D virtual environments on the web
b) It replaces all modern game engines

c) It requires no internet connection to work
d) It only supports text-based virtual worlds
✅ **Answer:** a) It allows users to create 3D virtual environments on the web

4. General VR & AR Development
Q14. Which of the following is NOT a key component of a **VR system**?
a) Display hardware
b) Tracking system
c) Cloud storage
d) VR software
✅ **Answer:** c) Cloud storage

Q15. The **primary goal of VR development tools and frameworks** is to:
a) Create high-quality 3D experiences
b) Make VR headsets smaller
c) Increase battery consumption
d) Reduce the need for programming
✅ **Answer:** a) Create high-quality 3D experiences