

Dr. Babasaheb Ambedkar Open University
Term End Examination February – 2026

Course	: BCADES WEF Aug-2024	Date	: 18-Feb-26
Subject Code	: BCADES-306 (Animation)	Time	: 11:30am to 01:45pm
Subject Name	: Virtual Reality	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Explain in details about latest trend in visualization in Virtual Reality.
2. Explain the relationship between technological vision and reality in VR development, with reference to aviation simulators and training systems.
3. What is High Fidelity Immersive Virtual Reality? Explain its key components and characteristics that enhance realism and user presence.
4. Explain the role of Virtual Reality in simulating hostile environments for space missions and astronaut training.
5. Explain Building Information Modeling (BIM) and discuss how Virtual Reality supports BIM adoption for effective knowledge transfer.

Section B

Answer the following (Attempt any four) (20)

1. Explain how Virtual Reality is used to study complex food environment interventions.
2. Explain the concept of VR-based rehabilitation systems.
3. Discuss the advantages of collaborative VR-based product design systems with suitable examples.
4. Explain how virtual environments help visualize construction sequencing and maintenance operations.
5. Explain how VR helps in the preservation and digital presentation of cultural heritage.
6. What is Fun Computing? Explain how Virtual Reality enhances entertainment, gaming, and interactive applications.

Section C

Part – A (Multiple Choice Questions) (10)

- 1 Which technology allows users to navigate within a 360° video environment?
A Nomadic Video B Immersive Video
C Auto-stereoscopy D Transparent Display
- 2 Which early device is considered a foundation of immersive simulation technology?
A Oculus Rift B CAVE system
C Link Flight Trainer D HoloMachine
- 3 Virtual Reality development closely parallels the evolution of which technology?
A Aviation B Telecommunications
C Robotics D Cinema

- 4 Which factor most affects immersion in high-fidelity VR systems?
 - A Screen brightness
 - B File size
 - C Keyboard input
 - D Rendering realism and low latency
- 5 The RRR-I method in rehabilitation primarily focuses on:
 - A Visual clarity
 - B Robotic interaction
 - C Rehabilitation evaluation
 - D Virtual gaming
- 6 VR simulations help robots mainly in:
 - A Battery optimization
 - B Learning adaptive walking
 - C Speech recognition
 - D Image compression
- 7 VR enhances product design by enabling:
 - A Real-time user interaction
 - B Faster internet access
 - C Manual drafting
 - D Paper-based modeling
- 8 Virtual environments in construction help reduce:
 - A Network traffic
 - B Software cost
 - C Internet dependency
 - D Design errors and safety risks
- 9 VR is used in the space industry mainly for:
 - A Astronaut training
 - B Accounting
 - C Office automation
 - D Social networking
- 10 VR supports BIM mainly by improving:
 - A Hardware cost
 - B File compression
 - C Internet bandwidth
 - D Knowledge visualization and collaboration

Part – B (Do as Directed)

(10)

State whether the following statements are true or false

- 1 Traditional flat panel monitors provide only an illusion of depth and do not offer a fully
immersive VR experience.
- 2 Nomadic Video requires a fixed and dedicated projection surface for visualization.
- 3 Fun computing is limited only to gaming applications.
- 4 Post-disaster virtual revival has no role in cultural heritage conservation.
- 5 3D CG reconstruction helps visualize damaged heritage sites before physical
restoration.
- 6 VR-based food studies cannot measure human behavioral responses accurately.
- 7 VR allows researchers to simulate real-life food environments in a controlled manner.
- 8 VR can be used to digitally document and preserve folk traditions and customs.
- 9 VR enhances BIM by enabling immersive visualization of building components and
processes.
- 10 Virtual simulation cannot replicate environmental constraints like zero gravity.
