19CET308- UNIT V

1. Introduction to AR/VR Applications

Q1. What is the primary purpose of **AR/VR applications** in various industries?
a) Entertainment only
b) Enhancing user interaction and real-world simulation
c) Reducing internet speed
d) Replacing human workers

✅ **Answer:** b) Enhancing user interaction and real-world simulation

Q2. Which of the following industries benefit the most from **AR/VR technology**?
a) Construction
b) Healthcare
c) Education
d) All of the above

✅ **Answer:** d) All of the above

2. AR/VR in Architecture, Engineering, and Construction (AEC)

Q3. How does **VR technology** assist architects in the design process?
a) By allowing them to physically build structures before approval
b) By creating immersive 3D models of buildings
c) By reducing the need for safety measures
d) By limiting material choices

✅ **Answer:** b) By creating immersive 3D models of buildings

Q4. What is a **major advantage** of using **AR in construction projects**?
a) It reduces material costs by 90%
b) It helps visualize building structures before construction
c) It eliminates the need for project managers
d) It replaces traditional blueprints entirely

✅ **Answer:** b) It helps visualize building structures before construction

Q5. What role does **AR play in engineering projects**?
a) Real-time visualization of mechanical designs
b) Replacing 3D printing entirely
c) Increasing labor costs
d) Eliminating the need for prototyping

✅ **Answer:** a) Real-time visualization of mechanical designs

Q6. In which way does **VR improve safety in the construction industry**?
a) By providing training simulations for workers

b) By replacing physical tools
c) By reducing the number of workers needed
d) By eliminating the need for site inspections

✅ **Answer:** a) By providing training simulations for workers

3. Benefits of AR/VR in Construction Industry

Q7. Which of the following is NOT a benefit of **AR/VR in construction**?
a) Improved collaboration between teams
b) Enhanced safety training
c) Increased cost of raw materials
d) Reduced construction errors

✅ **Answer:** c) Increased cost of raw materials

Q8. How does AR/VR help in project planning?
a) By providing real-time project simulations
b) By replacing engineers with AI models
c) By increasing project timelines
d) By reducing the need for digital blueprints

✅ **Answer:** a) By providing real-time project simulations

Q9. How does AR improve efficiency in the construction industry?
a) By enabling workers to access digital overlays of blueprints
b) By replacing all manual labor
c) By increasing the use of paper-based drawings
d) By reducing the use of software tools

✅ **Answer:** a) By enabling workers to access digital overlays of blueprints

4. Limitations of AR/VR in Construction Industry

Q10. What is one of the **biggest limitations** of AR/VR in construction?
a) High implementation costs
b) Increased errors in measurements
c) Reduced worker efficiency
d) Lack of internet connectivity

✅ **Answer:** a) High implementation costs

Q11. Why is **AR/VR adoption** slow in some construction companies?
a) Lack of awareness and training
b) Lack of electricity
c) It completely replaces manual labor
d) It reduces project completion speed

✅ **Answer:** a) Lack of awareness and training

Q12. What is a technological challenge in **VR adoption** for AEC?
a) The need for high-performance hardware
b) It requires physical blueprints
c) It cannot simulate large buildings
d) It replaces architects

✅ **Answer:** a) The need for high-performance hardware

5. AR/VR Applications in AEC Sectors

Q13. Which AEC sector benefits from **AR/VR-enhanced project visualization**?
a) Architecture
b) Engineering
c) Construction
d) All of the above

✅ **Answer:** d) All of the above

Q14. How does **AR technology** help on-site construction teams?
a) By displaying real-time data and instructions
b) By reducing labor efficiency
c) By increasing the need for manual measurements
d) By eliminating teamwork

✅ **Answer:** a) By displaying real-time data and instructions

Q15. What is a **common use case of VR in engineering**?
a) Simulating mechanical systems before production
b) Increasing project costs
c) Reducing software usability
d) Avoiding prototype development

✅ **Answer:** a) Simulating mechanical systems before production

6. Challenges of AR/VR in AEC

Q16. Which of the following is a **major challenge** in AR/VR for construction?
a) High initial investment costs
b) Lack of demand for digital tools
c) AR/VR being banned in construction
d) VR replacing traditional training entirely

✅ **Answer:** a) High initial investment costs

Q17. What is a common **technical issue** faced when using AR in construction sites?
a) Poor tracking accuracy in outdoor environments

b) AR replacing human workers
c) AR increasing blueprint complexity
d) AR slowing down construction projects

✅ **Answer:** a) Poor tracking accuracy in outdoor environments