

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER- VII EXAMINATION – SUMMER 2026****Subject Code:3171612****Date:08-06-2026****Subject Name:Virtual and Augment Reality****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Define: a) Virtual Reality b) Augmented Reality c) Mixed Reality	03
	(b) List out and explain the components of VR.	04
	(c) What do you understand by virtual reality? What are differences between virtual reality applications and multimedia applications? What is projection?	07
Q.2	(a) Write short note on “Real Time rendering”.	03
	(b) Explain Google Card Board in detail	04
	(c) Explain the Primary Features and Present Development on Virtual Reality in detail.	07
OR		
	(c) Explain the various interactive techniques in Virtual Reality.	07
Q.3	(a) List and explain the various challenges with Augmented Reality	03
	(b) Define computer graphics and also discuss rendering process.	04
	(c) Draw and explain system structure of Augmented reality.	07
OR		
Q.3	(a) Discuss Collision detection Generic VR system.	03
	(b) Explain in detail about scene illumination	04
	(c) Explain the visualization techniques for augmented reality.	07
Q.4	(a) What is Tracker, Sensor and Digital Glove?	03
	(b) Explain the role of eyes, ears and senses in Augmented Reality	04
	(c) Explain 2D and 3D with respect to Virtual Reality	07
OR		
Q.4	(a) Explain Virtual World Space with suitable example.	03
	(b) List out the challenges of AR.	04
	(c) What is Shading? Explain the various algorithms of it	07
Q.5	(a) What is 3D computer graphics and also discuss rendering process.	03
	(b) What are the tools for Virtual Reality game developer?	04
	(c) Discuss in detail the use of Augmented Reality in gaming industry.	07
OR		
Q.5	(a) Discuss wireless displays in educational augmented reality applications.	03
	(b) What is the application of VR in digital entertainment?	04
	(c) Discuss in detail the use of Augmented Reality in physical exercise.	07
