

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII EXAMINATION – WINTER 2025

Subject Code:3171612

Date:01-12-2025

Subject Name:Virtual and Augment Reality

Time:10:30 AM TO 01:00 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) Write a short note on benefits of VR & AR.	04
	(c) Explain the various components of virtual reality systems with block diagram.	07
Q.2	(a) List out the Real Time Application of VR & AR.	03
	(b) Write a short note on Virtual Reality in flight simulation.	04
	(c) Explain in detail about VRML (Virtual Reality Modeling Language).	07
	OR	
	(c) Explain in detail about Rotation and Scaling transformation.	07
Q.3	(a) List out difference between photopic vision & scotopic vision.	03
	(b) Write a short note on use of Virtual Reality in Military & Defense.	04
	(c) Explain in detail about 3D clipping with suitable example.	07
	OR	
Q.3	(a) Write a short note on Google Cardboard.	03
	(b) Write a short note on Virtual Reality applications in education.	04
	(c) Explain in detail about the Virtual Environment.	07
Q.4	(a) Write down the difference between Linear and Nonlinear interpolation.	03
	(b) Write a short note on Object Animation with suitable example.	04
	(c) Explain in detail about virtual world space with suitable example.	07
	OR	
Q.4	(a) Explain three 'I' of virtual reality.	03
	(b) Write a short note on the use of Virtual Reality in mobile gaming.	04
	(c) Explain in detail the use of VR in Manufacturing industry.	07
Q.5	(a) Write a short note on HMDs - Head Mounted Displays.	03
	(b) Explain the use of Virtual Reality in Entertainment industry.	04
	(c) Explain in detail the use of Virtual Reality in Tourism.	07
	OR	
Q.5	(a) Define a) The blind spot b) Movement Capture.	03
	(b) Write a short note on Sensor, Tracker and Digital Glove.	04
	(c) Explain in detail the use of Virtual Reality in Art & Design.	07