

25/05/2022

K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22

(Autonomous College Affiliated to University of Mumbai)

End Semester Exam

April - May 2022

(B.Tech) Program: Information Technology

Examination: LY

Semester: VIII

Course Code: IUITDLC8033 and Course Name: Augmented Reality – Virtual Reality

Duration: 03 Hours

Max. Marks: 60

Instructions:

- (1) All questions are compulsory.
- (2) Draw neat diagrams wherever applicable.
- (3) Assume suitable data, if necessary.

		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	Describe Gestural Commands.	02	CO5	Understand
i)	Describe 3D coordinate system.	02	CO6	Understand
ii)	Define VR toolkit? Explain in brief.	02	CO4	Understand
v)	Describe perception of motion.	02	CO2	Understand
v)	Describe the human haptic system.	02	CO1	Understand

i)	Describe VR Environment.	02	CO3	Understand
ii)	Describe probability distributions.	02	CO2	Understand
iii)	Define gesture input devices.	02	CO1	Understand
Q.2	Solve any four questions out of six.	16		
)	Describe the Application of AR and VR in Digital entertainment.	04	CO5	Understand
i)	Draw and explain CIE color standard with RGB triangle.	04	CO2	Understand
ii)	Apply the Markless and marker tracking of AR.	04	CO4	Apply
v)	Demonstrate geometry object with respect to orientation.	04	CO3	Apply
7)	Define Key issues for ar/vr displays.	04	CO6	Understand
7i)	Discuss the functionality 5DT data glove with digital glove.	04	CO1	Understand
Q.3	Solve any two questions out of three.	16		
)	Describe detection mechanisms with help of neural circuitry model Reichardt detector.	08	CO2	Understand
i)	Apply the following terms in the context of virtual environment: World Space Objects - Geometry, Position Tessellated Data LODs Scripts	08	CO3	Apply
ii)	Describe Key Challenges with AR and most important technical challenges in Virtual Reality.	08	CO6	Understand
Q.4	Solve any two questions out of three.	16		

)	Define the Challenges with AR and VR. Say your opinion to create even better AR and VR interaction methods.	08	CO5	Understand
i)	Describe the working of Pinch Glove and Cyber Glove.	08	CO1	Understand
ii)	Demonstrate the real walking and redirected walking is carried put in travel technique.	08	CO4	Apply