APPENDIX-III

Question Paper Template (For Online Examination)

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

(Autonomous College Affiliated to University of Mumbai)

End Semester Exam

Nov -Dec (2021-2022)

(B.Tech.) Program: Computer Engineering

Examination: LY Semester: VII

Course Code: 1UCEDLC7041 and Course Name: Augmented and 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)	Explain the difference between Virtual reality and Augmented Reality	2M	1	U
ii)	Describe the system Architecture of AR	2M	5	U
iii)	Illustrate Script and object behavior with example	2M	3	U
iv)	Classify the 3D Manipulation	2M	4	An
v)	How is depth perceived by the human vision system	2M	2	U
vi)	Interpret Editing of the lens in film and television post-production	2M	6	U

vii)	Explain the input and output devices used in VR	2M	1	U
viii)	What is the use of Simple virtual Hand	2M	4	U
Q.2	**Solve any four questions out of six.**	16		
i)	Illustration of the human gait cycle with respect to walking metaphor	4M	4	U
ii)	Define the terms a) Virtual Reality, b) Telepresence, c) Augmented Reality, and d) Cyberspace	4M	1	R
iii)	Describe the Marker and Marker-less tracking for augmented reality	4M	5	U
iv)	"Virtual Reality in sports" – Analyze it and discuss with real-time scenario	4M	6	An
v)	Explain the geometric position of object and the Bounding Volume	4M	2	U
vi)	Why VR system often needs to have some sort of control panels available to the user	4M	3	An
Q.3	**Solve any two questions out of three.**	16		
i)	Discuss the VR Gaming Case Study with respect to system controls	8M	4	C
ii)	Explain the working of Cyber Glove	8M	1	U
iii)	Discuss about VR Technology in Physical Exercises and Games	8M	6	C
Q.4	**Solve any two questions out of three.**	16		
i)	Explain in brief the application of AR as Magic Lens	8M	5	U
ii)	Explain the following terms in the context of virtual environment a) World Space b) Objects - Geometry, Position c) Tessellated Data d) LODs	8M	3	U

iii)	Discuss how would you construct the best frame rate for video? Which four things you need to keep in mind when choosing a frame rate.	8M	2	C