


Name:			
Enrolment No:			
UPES End Semester Examination, December 2023			
Course: Augmented and Virtual Reality Development Program: B.Tech CSE All Branches Course Code: CSGG4010		Semester: VII Time : 03 hrs. Max. Marks: 100	
Instructions:			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q1	Differentiate between AR and VR with examples.	4	CO1
Q2	Discuss three pillars of virtual reality.	4	CO1
Q3	Give five types of Head Mounted Display (HMDs).	4	CO1
Q4	Mention two SDKs for AR development, which are open source.	4	CO1
Q5	Give five applications of Extended Reality	4	CO1
SECTION B (4Qx10M= 40 Marks)			
Q6	Differentiate between direct and indirect manipulation in AR development.	10	CO2
Q7	Mention the drawback associated with VRML based Virtual Reality development.	10	CO2
Q8	Discuss the need for gestalt principles for designing the UI elements of the application.	10	CO1
Q9	Write short note on the virtual button in AR development.	10	CO2
SECTION-C (2Qx20M=40 Marks)			
Q10	Write down the steps involved in running a marker less based application using Vuforia Engine.	20	CO3
Q11	Consider you have to create a history based augmented reality application. Discuss which platform you will pick, marker or marker less; give justification to your choice. Discuss the various components in UI, which you will incorporate to make it a successful product. You can make necessary assumption about the content of product, which you wish	20	CO3

	<p>to create; you can make use of wireframes for depicting the UI of the application.</p> <p style="text-align: center;">Or</p> <p>Ideate the whole development process for developing a Virtual reality game, discuss various components, which you will consider while designing the levels of the application, ensuring that player does feels a part of the application, incorporate gamification techniques for it.</p>		
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