Total No. of Questions : 8] **SEAT No. :**

PA-1625 **[Total No. of Pages : 2**

[5926]-259

T.E. (Computer Engineering)(Honors)
VIRTUAL REALITY
Augmented Reality
(2019 Pattern) (Semester - I) (310701)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Explain in detail how to change position and rotate objects using Geometric Models. **[9]**

b) Explain different types of eye movements. **[8]**

OR

Q2) a) Describe physiology of the human eye with a diagram. **[9]**

b) Describe axis angle representations of rotation in detail. **[8]**

Q3) a) Explain perception of color. **[6]**

b) Explain Monocular Depth Cues. **[6]**

c) How to improve latency? **[6]**

OR

Q4) a) How to improve frame rates in Visual Perception? **[6]**

b) What are Ray Tracing and Shading Models? Explain. **[6]**

c) What are the different strategies used to reduce the latency and to minimize the side effects of it? **[6]**

Q5) a) Explain the role of Physics Engine in Virtual World. **[10]**

b) Explain vestibular systems in detail. **[7]**

OR

P.T.O.

Q6) a) Explain Tracking in 2D Orientation. **[10]**

b) State and Explain different types of vection. **[7]**

Q7) a) Explain the term locomotion. **[9]**

b) Describe Physiology of human hearing with diagrams. **[9]**

OR

Q8) a) Explain in short Auditory Perception and Auditory Rendering. **[9]**

b) Explain the interaction with motor programs and remapping of audio? **[9]**