

Total No. of Questions : 8]

SEAT No. :

P473

[Total No. of Pages : 2

[6003]-581

T.E. (Computer Engineering) (Honors)
VIRTUAL REALITY AUGMENTED REALITY
Augmented Reality
(2019 Pattern) (Semester - II) (310703)

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.

- Q1)** a) Explain in detail role of Computer Vision in Augmented Reality. [9]
b) Explain outdoor tracking in details. [8]

OR

- Q2)** a) Explain natural feature tracking by detection in augmented reality. [9]
b) How pose estimation from Homography is done in marker tracking. Explain. [8]

- Q3)** a) Explain marker based tracking in details? [6]
b) What are different types of markers? [6]
c) What is scene generator? [6]

OR

- Q4)** a) Write note on: (Any 2) [6]
i) Template markers
ii) 2D barcode markers
iii) Imperceptible markers
b) When to use marker-based tracking. Explain. [6]
c) How to select a marker type. Explain with respect to system requirement [6]

P.T.O.

- Q5)** a) Explain with diagram monitor based augmented reality display. [9]
b) Explain different components of augmented reality. [8]

OR

- Q6)** a) Compare optical see-through and video see-through head mounted display. [9]
b) Explain virtual retinal systems. [8]

- Q7)** a) Explain the working of SLAM technique. [9]
b) What is mixed reality? Explain the different application of mixed reality. [9]

OR

- Q8)** a) Explain the difference between computer vision and mixed reality. [9]
b) Explain parallel tracking and mapping (PTAM) in detail. [9]