Code: EC8T1

IV B.Tech-II Semester–Regular/Supplementary Examinations–March 2020

TV AND SATELLITE COMMUNICATIONS
(ELECTRONICS AND COMMUNICATION ENGINEERING)

Duration: 3 hours   Max. Marks: 70

PART – A

Answer *all* the questions.   All questions carry equal marks

$$11x\ 2 = 22\ M$$

1.

a) Define persistence of vision and visual acuity.

b) List the characteristics of visible light.

c) What is Sampling and Quantization?

d) Summarize the Dynamic Range and Quantization error.

e) Classify coded signals.

f) Explain the concept of Digital Audio.

g) Write the applications of satellite communication.

h) Define apogee and perigee.

i) What is PSLV?

j) Explain the following terms: (i) Angle of Inclination, (ii) Sub-satellite Point.

k) Explain about orbital perturbations.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

$$3 \times 16 = 48 \text{ M}$$

2. a) Illustrate the concept of Interlaced Scanning? Explain how it reduces the flicker effect. **8 M**

   b) Discuss the constructional details of the composite video signal with neat sketch. **8 M**

3. a) Explain Digital to Analog (D/A) Conversion process with neat sketch. **8 M**

   b) Examine the concept of The Typical Black Box Digital Device. **8 M**

4. a) Explain the following topics in detail:
   (i) The sampling rates,
   (ii) The Quantizing Range. **8 M**

   b) With the help of suitable sketch, explain Synchronization between Digital Audio and Video Signals. **8 M**

5. a) Explain kepler`s laws of planetary rotation. How are these applied to the case of geostationary satellite? **8 M**

   b) Discuss about the orbital parameters in detail. **8 M**

6. a) Explain TTC & M subsystem of a satellite with a block diagram. 8 M

   b) Discuss about launchers and launch vehicles in detail. 8 M