PVP 14

Code: EC8T1

IV B.Tech - II Semester - Regular Examinations - March 2018

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) What are the characteristics of visible light?
b) Give the relationship between the number of picture elements that can be resolved given a specified picture height and viewing distance.
c) What are the steps involved in AID conversion?
d) What is the use of quantizing the sampled values?
e) List various coded signals.
f) What is Audio synchronization?
g) Interpret the factors which makes the satellite to continue in its orbit?
h) Compare the terms Geostationary and Geosynchronous with respect to satellite.
i) Compare expendable launch vehicle and reusable launch vehicle.
j) Define Geo Transfer Orbit.

k) Identify the subsystem responsible to control the satellite in the orbit.

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.
3 x 16 = 48 M

2.a) With the help of block diagram, explain monochrome television system from signal source to CRT display. 8 M

b) With necessary diagrams, explain horizontal blanking intervals. 8 M

3.a) With the help of block diagram, explain digital black box. 8 M

b) Explain DIA conversion with necessary diagrams. 8 M

4.a) Explain the sampling rates in digital TV. 8 M

b) Describe digital Audio concepts. 8 M

5.a) Explain Kepler's three laws of planetary motion, Derive the mathematical formulation of Kepler's third law of planetary motion. 8 M

b) A satellite is in an elliptical orbit with a perigee of 1000 km and an apogee of 4000km. Find the period and eccentricity of the orbit. 8 M

6.a) How Attitude control system is responsible in the control of satellite orbit with necessary diagrams. 8 M

b) How a TTC subsystem helps in providing Telemetry data and explain the Satellite monitoring mechanism with the help of neat block diagram. 8 M