Reg. No. : | | | | | | | | | | |

Question Paper Code: 49417

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Elective

Electronics and Communication Engineering

14UEC917 - SATELLITE COMMUNICATION PRINCIPLES AND APPLICATIONS

(Regulation 2014)

Duration: 1:45 hour Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. What are called look angles?
2. Define apogee and perigee.
3. List the elements in a transponder.
4. Draw the block diagram of a space craft command system.
5. List the advantages of TDMA over FDMA.
6. Distinguish preassigned and demand assigned traffic.
7. Write the features of CATV.
8. A satellite downlink at 10GHz operates with a transmit power of 5w and an antenna gain of 48.2dB. Estimate the EIRP in dBW.
9. What is the principle behind DTH and GPS?
10. Summarize the regions covered by INMARSAT.
11. Define look angle.
12. What are the conditions required for an orbit to be geostationary?

13. Write short notes on attitude control system.

14. State pitch angle.

15. List the advantages of TDMA over FDMA.

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. State Kepler's three laws for planetary motion. Illustrate in each case their relevance to artificial satellites orbiting the earth. (10)

17. Discuss the satellite uplink and downlink analysis. (10)

18. Explain how Television signals are transmitted using Analog FM transmission by satellite. (10)

19. Explain in detail equipment for earth stations. (10)

20. Explain in detail satellite navigational system. (10)