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

Question Paper Code: 39417

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

Seventh Semester

Electronics and Communication Engineering

01UEC917 - SATELLITE COMMUNICATION PRINCIPLES AND APPLICATIONS

(Regulation 2013)

Duration: 1:45 hour Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. Define look angle.
2. Define apogee and perigee.
3. List the elements in a transponder.
4. What is meant by frequency reuse?
5. List the advantages of TDMA over FDMA.
6. Distinguish preassigned and demand assigned traffic.
7. State the reason for the high power amplifier in earth stations.
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. Point out the satellite mobile services.
11. List out the requirements for an orbit to be geostationary.

12. What are called look angles? Classify them.

13. Draw the block diagram of a space craft command system.

14. Write an expression for carrier to noise ratio for downlink design.

15. Mention the disadvantages of FDMA.

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. Describe the terms of Earth orbiting satellites. (10)

17. Describe the various modes of interference that can occur in a satellite communication system. (10)

18. Illustrate the features of various multiple access schemes deployed for satellite access and compare it. (10)

19. Explain in detail about of the master antenna TV system with neat diagram. (10)

20. Describe about VSAT system. (10)