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

Question Paper Code: 39417

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Seventh Semester

Electronics and Communication Engineering

01UEC917 - SATELLITE COMMUNICATION PRINCIPLES AND APPLICATIONS

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

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.

PART - B (5 x 16 = 80 Marks)

11. (a) Describe the terms of Earth orbiting satellites. (16)

Or

(b) (i) Explain the significance of station keeping. (10)

(ii) Illuminate the limits of visibility and sun transit outage. (6)

12. (a) Describe the various modes of interference that can occur in a satellite communication system. (16)

Or

(b) Draw the neat sketch and explain the Input Demultiplexer. (16)

13. (a) Illustrate the features of various multiple access schemes deployed for satellite access and compare it. (16)

Or

(b) Draw the block diagram of spread spectrum communication system and explain. (16)

14. (a) Explain in detail about of the master antenna TV system with neat diagram. (16)

Or

(b) Explain the features of MATV and CATV systems with neat diagram. (16)

15. (a) (i) Describe about VSAT system. (6)

(ii) Briefly discuss the working of GPS. (10)

Or

(b) Describe the operation of direct to home broadcast system and also mention the advantages of DTH. (16)

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