Reg. No. :

Question Paper Code: 39044

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

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 between DSSS and FHSS.

7. State the reason for the high power amplifier in earth stations.

8. What are the requirements of an outdoor unit of MATV?

9. Write down the various applications of Radar sat.

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) Determine the angle of tilt required for a polar mount used with an earth station at latitude 38 *degrees* north. Given, radius of earth is 6371 *km*. (16)

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) Draw the block diagram of satellite-switched TDMA and explain. (16)

Or

(b) Explain the principle behind the spectrum spreading and dispreading and how this is used to minimize interference in a CDMA system. (16)

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

Or

(b) Draw and explain the block diagram of a transmit-receive earth station. (16)

15. (a) Explain the role of MPEG compression standards in DBS system. (16)

Or

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

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