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

Question Paper Code : 86585

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Seventh Semester

Electronics and Communication Engineering

EC 1403 — SATELLITE COMMUNICATION

(Regulations 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the features of Polar orbiting satellite?

2. Define right ascension of ascending node.

3. Define sun transit outage.

4. What do you meant by station keeping?

5. What is meant by input back off a transponder?

6. What is intermodulation noise?

7. List the advantages of CDMA especially where VSAT type terminals are involved.

8. What is meant by thin route service?

9. What is map?

10. What is meant by overlaying?

PART B — (5 × 16 = 80 marks)

11. (a) Explain the launching procedure for putting the GEO satellites in the orbit. (16)

Or

(b) What are the orbital parameters? Derive the expression for orbital equation of the satellite starting from Newton's law. (16)

12. (a) Explain about advanced Tiros-N spacecraft and Morelos with neat a sketch. (16)

Or

(b) Explain in detail about antenna look angles and the polar mount antenna. (16)

13. (a) Draw the block diagram and explain the receive only home TV systems. (16)

Or

(b) Explain in detail about :

(i) EIRP (8)

(ii) Transmission Losses. (8)

14. (a) (i) Discuss in detail satellite links and TCP. (8)

(ii) Explain Direct sequence spread spectrum. (8)

Or

(b) (i) With neat diagrams, explain the TDMA burst and frame structure of satellite system. (12)

(ii) Compare FDMA, TDMA, and CDMA. (4)

15. (a) (i) Describe the visual interpretation of satellite images. What are the elements of interpretation? Explain. (8)

(ii) Explain the various image enhancement schemes. (8)

Or

(b) (i) Explain the significance of integrating GIS and remote sensing. What are their applications? (8)

(ii) Write a detailed notes on GPS and its application in GIS. (8)

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