

B.Tech (Electronic & Tele Communication Engineering)

8th Semester (G-Scheme)

Examination, July-2022

SATELLITE COMMUNICATION

Paper- PCC-ECE-430-G

Time allowed : 3 hours]

[Maximum marks : 75

*Note : Question No.1 is compulsory. Attempt five question in all, selecting one question from each section. All questions carry equal marks.*

1. Describe the following terms: 15
- (a) Transponder
  - (b) FDMA
  - (c) Look Angle

**Section-A**

2. (a) What are the elements of satellite communication system? Explain each with suitable block diagram? 7.5
- (b) Compare Active and Passive Satellite. 7.5
3. Derive general link equations. Find out C/N and G/T ratios. 15

**Section-B**

4. Describe advantages of digital communication. What are the element of digital satellite communication? Explain it. 15

5. Describe various digital modulation techniques. 15

**Section-C**

6. (a) Compare TDMA and FDMA. 7.5  
(b) What do you mean by TDMA frame structure and Burst structure? 7.5
7. (a) Write three Kepler's law of Satellite communication and explain them 7.5  
(b) Write and derive various orbital parameters. 7.5

**Section-D**

8. Explain the following: 7.5  
(a) VSAT  
(b) Defence Satellite 7.5
9. What do you understand by satellite beam acquisition, tracking and positioning in laser satellite communication? 15