

**M.Tech. 1st Semester (ECE) CBCS Scheme**  
**Examination, December-2019**  
**SATELLITE AND SPACE COMMUNICATION**  
**Paper-MTECE21C2**

*Time allowed : 3 hours* [Maximum marks : 100]

**Note : Question No. 1 is compulsory. Attempt any one question from each section.**

1. (a) What do you mean by geo-synchronous satellite ?
- (b) Define Active and Passive Satellite.
- (c) Define Attitude and eclipses.
- (d) What do you mean by GPS systems ?  $4 \times 5 = 20$

**Section-A**

2. Explain satellite frequency allocation and band spectrum in detail.

or

3. What are different applications of satellite ? Discuss in detail.

**Section-B**

4. Explain in delay transponders, Earth stations with antennas and earth coverage.  $20$

or

5. Derive the up link and down link equations in satellite communication.  $20$

**Section-C**

6. Write short note on :  $20$   
 (i) Free Space loss  
 (ii) Telemetry

or

7. Explain MSK in detail with diagram.  $20$

**Section-D**

8. Write short note on :  $20$   
 (i) TELSAT  
 (ii) INSAT

or

9. Explain different multiplexing techniques with diagram.  $20$

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