

BTECH
(SEM VIII) THEORY EXAMINATION 2018-19
SATELLITE COMMUNICATION

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.

2 x10 = 20

- (a) What do you mean by geostationary Orbits?
- (b) What are the various orbital effects?
- (c) Define look angle.
- (d) What do you mean by TDM? Why it is required?
- (e) What is noise temperature?
- (f) Define Pre emphasis and de emphasis.
- (g) What is Faraday rotation?
- (h) What do you mean by troposphere scintillation?
- (i) Write the applications of LEO system.
- (j) What are the applications of GPS?

SECTION B

2. Attempt any THREE questions:

(10x3= 30)

- (a) What are the various antennas used in satellite communication?
- (b) Explain the significance of G/T ratio of an earth station.
- (c) Explain the TDMA system in details.
- (d) What do you mean by Convolutional coding? Explain.
- (e) Explain the working principle of GPS system with suitable diagram.

SECTION C

3. Attempt any ONE of the following:

(10x1=10)

- (a) What are the various elements in satellite communication? Explain.
- (b) How a satellite is placed in its orbit? Explain.

4. Attempt any ONE of the following:

(10x1=10)

- (a) Draw the block diagram of TTCM and explain.
- (b) What do you mean by station keeping of satellites? Explain its significance.

5. Attempt any ONE of the following:

(10x1=10)

- (a) Explain DAMA system in details.
- (b) Explain FM improvement model with suitable diagram.

6. Attempt any ONE of the following:

(10x1=10)

- (a) Write various correction measures against propagation impairments
- (b) Write short notes on—
 - (i) Atmospheric absorption
 - (ii) Depolarization

7. Attempt any ONE of the following:

(10x1=10)

- (a) Write short notes on VSAT.
- (b) Explain DBS home receiver with suitable diagram.