

# CBCS SCHEME

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15MT654

## Sixth Semester B.E. Degree Examination, Dec.2018/Jan.2019 Satellite Communication

Time: 3 hrs.

Max. Marks: 80

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

### Module-1

- 1 a. Define trajectory. Explain orbital parameters. (10 Marks)  
b. Explain types of satellite orbits. (06 Marks)

OR

- 2 a. Explain the commonly employed techniques for satellite stabilization. (08 Marks)  
b. Explain the following :  
i) Azimuth angle  
ii) Elevation angle. (08 Marks)

### Module-2

- 3 a. Explain the attitude and orbit control. (04 Marks)  
b. Explain the types of earth station. (12 Marks)

OR

- 4 a. Explain earth station architecture with diagram. (06 Marks)  
b. Explain satellite tracking techniques for the following :  
i) Lobe switching  
ii) Sequential lobing  
iii) Conical scan. (10 Marks)

### Module-3

- 5 a. Explain simple channel per carrier system. (08 Marks)  
b. Explain multiple channel per carrier system. (08 Marks)

OR

- 6 a. Explain satellite link parameters. (10 Marks)  
b. Explain the following propagation consideration :  
i) Free space loss  
ii) Attenuation due to rain. (06 Marks)

### Module-4

- 7 a. Explain types of transponders in communication satellite. (08 Marks)  
b. Explain advantages of satellite over terrestrial network. (08 Marks)

OR

- 8 a. Explain regional satellite system. (08 Marks)  
b. With neat diagram explain satellite cable television. (08 Marks)

### Module-5

- 9 a. Explain classification of satellite remote sensing system. (10 Marks)  
b. Explain the sensor parameters in satellite remote sensing. (06 Marks)

OR

- 10 a. Describe weather forecasting satellite orbits. (08 Marks)  
b. Explain Global positioning system concept. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.