

Roll No.

24441

**B. Tech. 7th Semester (ECE)
Examination – May, 2019**

SATELLITE COMMUNICATION

Paper : ECE-403-F

Time : Three Hours] [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

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

- 1. (i) What do you mean by modem and codec ?
Discuss. 5
- (ii) Discuss the concept of SCPC system. 5
- (iii) Compare TDMA and CDMA. 5
- (iv) Discuss tracking and positioning in satellite. 5

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SECTION – A

- 2. (a) Describe frequency allocation and band spectrum in satellite communication. 10
- (b) Differentiate between active and passive satellite. 10
- 3. (a) Derive the expression for system noise temperature, C/N and G/T ratio. 10
- (b) Write short note on earth station parameters in satellite communication. 10

SECTION – B

- 4. (a) Explain FDM techniques in analog satellite communication. 10
- (b) Explain inter modulation products and their effects in FM/FDM system. 10
- 5. (a) Describe the elements of digital satellite communication. https://www.haryanapapers.com
- (b) Discuss satellite digital link design equation. 10

SECTION – C

- 6. (a) Explain TDMA burst structure and frame efficiency. 10
- (b) Explain satellite switched TDMA system. 10

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7. (a) Discuss different orbital parameters in satellite communication. 10
- (b) What do you mean by station keeping and satellite stabilization? 10

SECTION – D

8. (a) Explain MSAT in special purpose communication satellite. 10
- (b) Differentiate between INMARSAT and INTELSAT. 10
9. Write short notes on : 20
- (a) Optical satellite link transmitter
- (b) Deep space optical communication
- (c) LANDSAT

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