

Roll No.

Total Pages : 2

BT-4/M-22

44217

INTELLIGENT COMMUNICATION SYSTEM

Paper-EC-CS-AIDS-206A

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *five* questions in all, selecting at least *one* question from each unit. All questions carry equal marks.

UNIT-I

1. (a) What do you understand by multiplexing? What are the differences between Time Division Multiplexing (TDM) and Frequency Division Multiplexing (FDM)? Explain.
(b) What is Nyquist-Shannon sampling theorem? What is quantization theorem? Discuss.
2. (a) What do you understand by ASK and FSK? What are the advantages of FSK over ASK? Discuss.
(b) What are the basic elements of communication system? Discuss.

UNIT-II

- 3 (a) What is Huffman coding? Is it lossy or lossless? Discuss the application of Huffman coding in digital communication.
(b) Write a note on channel coding theorem.

4. (a) What is the trellis graph? What are its applications? Discuss.
- (b) Differentiate between block codes and convolutional codes. Also explain the use of Hamming code for error detection and correction.

UNIT-III

5. (a) What is OSI reference model? What are the different layers in it? Discuss in brief their functionalities.
 - (b) What is Asynchronous Transfer Mode (ATM)? Discuss the ATM cell format.
6. (a) What is ISDN? What are its advantages? What is the difference between ISDN and B-ISDN? Discuss the architecture of B-ISDN.
 - (b) What is the difference between TCP and UDP protocol? Discuss.

UNIT-IV

7. (a) What is Intelligent Communication System? What are its characteristic features? Discuss.
 - (b) What is a production? What can be the different applications of production rules to telecommunication? Discuss.
8. (a) What is Robinson's resolution principle? Explain using suitable example.
 - (b) What is a clause? Explain the procedure of converting a statement into a set of clauses.