TED (15) 5201
(Revision - 2015)

A20 – 00578

Reg. No……
Signature …….

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2020

DIGITAL COMMUNICATION

[Maximum Marks: 75] [Time: 2.15 Hours]

PART-A

(Answer ***any three*** questions in one or two sentences. Each question carries 2 marks)

I. 1. State sampling theorem.

2. List the different types of pulse modulation techniques.

3. What is QPSK?

4. List the name of three basic ARQ systems.

5. State the term Entropy. (3 x 2 = 6)

PART-B

(Answer any ***four*** of the following questions. Each question carries ***6*** marks)

II 1. Compare PAM with PWM.

2. Distinguish between QPSK and BPSK.

3. Explain a PCM communication system with block diagram.

4. Describe Shannon-Hartley theorem.

5. Derive the equation for finding Entropy.

6. Write short notes on (a) Digital signature (b) Cipher.

7. Describe TDM with necessary diagrams. (4 x 6 = 24)

PART-C

(Answer ***any of the three units*** from the following. Each full question carries 15 marks)

UNIT – I

III (a) With necessary diagrams briefly explain the modulation and Demodulation of PPM system. (8)

(b) Explain Delta modulation systems. (7)

OR

IV (a) Describe the process of quantization with necessary diagrams. (8)

(b) Explain Adaptive Delta modulation. (7)

UNIT – II

V (a) With block diagram and waveforms explain the generation and Demodulation of BFSK system. (8)

(b) Explain MSK systems. (7)

OR

VI (a) With necessary diagrams and wave forms describe BPSK modulation. (8)

(b) Explain QPSK modulation with necessary diagrams. (7)

UNIT- III

VII (a) What is Hamming distance? Explain How Hamming code is used for error correction with an example. (8)

(b) Describe Block interleaving method to avoid burst error. (7)

OR

VIII (a) Explain Shanon-Fano algorithm for coding. (8)

(b) Explain CRC coding technique. (7)

UNIT - IV

IX (a) Explain different methods of ARQ for error control. (9)

(b) Explain synchronous and asynchronous data transmission. (6)

OR

X (a) Describe FDM with block diagram. (8)

(b) Write short notes on (a) Circuit switching (b) packet switching. (7)
