TED (15) – 5201

(REVISION — 2015)

Reg. No.....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

DIGITAL COMMUNICATION

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Define Quantization Error.
2. Write demerit of MSK.
3. Define Channel Capacity.
4. List any two Error Control Methods.
5. List any two advantages of PAM. (5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. State and explain Sampling Theorem.
2. Describe convolution interleaving code.
3. List the advantages of GMSK.
4. Write a note on Hamming Code.
5. Explain Sliding window ARQ.
6. Describe noises in Delta Modulation.
7. Distinguish between synchronous and asynchronous data transmission. (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

III (a) Explain the working of DPCM system with neat block diagram. 10

(b) List the advantages of digital communication systems over analog systems. 5

OR

IV (a) Explain with neat block diagrams, Delta Modulator Transmitter and Receiver. 12

(b) List the applications of Pulse Code Modulation. 3

UNIT — II

V (a) Explain QPSK system and its spectrum. 10

(b) Draw the diagram of BFSK generator. 5

OR

VI (a) Explain BPSK system and its spectrum. 10

(b) Distinguish between QPSK and BPSK. 5

UNIT — III

VII (a) Explain Shanon Fano algorithm. 8

(b) Describe about block interleaving code. 7

OR

VIII (a) Explain Error detection codes. 12

(b) List the limitations of FEC Codes. 3

UNIT — IV

IX (a) Describe TDM. 10

(b) Write the function of guard bands in FDM. 5

OR

X Write notes on : (i) Digital signature

(ii) Ciphers

(iii) Full Duplex 15