Roll No. .....

24042

B. Tech. 3rd Semester (IT)

Examination – December, 2018

DIGITAL ANALOG COMMUNICATION

Paper : EE-217-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 : Attempt ***five*** questions in all, selecting ***one*** question from each Section. Question No. **1** is ***compulsory.*** All questions carry equal marks.

1. (a) What is Nyquist Criteria ? 4

(b) Define Delay distortion. 4

(c) Design Hamming Code for 1010. 4

(d) Define Asynchronous Transmission. 4

(e) What do you mean by Burst Error ? Also define Burst length with suitable example. 4

SECTION – A

2. (a) Explain the block diagram of communication system. 10

(b) Discuss various signal properties in detail. 10

3. (a) What are sign waves ? Expand sign waves with the help of Fourier series. 10

(b) Define Bandwidth. How Bandwidth effects the digital signal. 10

SECTION – B

4. (a) Define modulation. Explain Frequency Modulation (FM) in detail. 10

(b) Explain various Data Encoding techniques with the help of waveforms. 10

5. (a) Write briefly about physical layer interface. Explain any ***one*** in detail. 10

(b) What do you mean by Transmission media ? Discuss Co-axial cable and fibre opticable as wireline communication medium. 10

SECTION – C

6. (a) Discuss various circuit switching techniques. 10

(b) Write briefly about simplex protocol and stop-and-wait protocol. 10

7. (a) Discuss PSTN in detail. 10

(b) What do you mean by multiplexing ? Explain Frequency Division Multiplexing (FDM) in detail. 10

SECTION – D

8. (a) A series of 8 bit data 11010101 is transmitted. Do CRC generation process with the help of generator polynomial given as 1101. 10

(b) Discuss Huffman encoding with the help of example. 10

9. Write short notes on the following :

(a) Public Key Cryptography 10

(b) Data Compression 10