

Roll No.

24042

B. Tech. 3rd Sem. Information

Technology (Branch - VI)

Examination – December, 2013

DIGITAL ANALOG COMMUNICATION

'F' Scheme

Paper : EE-217-F

Time : Three hours]

[Maximum Marks : 100

Before answering the question, 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* and attempt any one question from each Section.

1. (a) Define energy and power signal ? $2 \times 10 = 20$
(b) Define frequency and wavelength ?
(c) Express the frequency of a period of 220ns in Hz, MHz and GHz ?
(d) Define Bandwidth ?

- (e) Define modulation index ?
- (f) What is the frequency range of AM & FM ?
- (g) Define sampling.
- (h) Define Bit error rate ?
- (i) Define Asynchronous transmission.
- (j) Define secret key cryptography.

SECTION – A

- 2. (a) Define signal with their properties in detail ? 10
- (b) Explain properties of fourier transform in detail ?10
- 3. (a) Explain the effect of limited B. W. on digital signal. 10
- (b) Find the Fourier transform of coswot & sinwot ?10

SECTION – B

- 4. (a) Define modulation and Differentiate between A. M. and F. M. 10
- (b) State and prove Nyquist theorem. 10

5. (a) What do you mean by encoding and explain their types ? 10
- (b) What do you mean by physical layer interfaces. Explain any one in detail ? 10

SECTION - C

6. (a) Differentiate between Serial and parallel transmission mode. 10
- (b) Explain stop & wait protocol in detail ? 10
7. (a) Differentiate between connection oriented and connection less services ? 10
- (b) What do you mean by multiplexing and explain their types in detail. 10

SECTION - D

8. (a) What do you mean by error detection ? Explain parity check and block sum check method in detail ? 10
- (b) Explain Huffman encoding with example. 10

9. (a) Write short note on CRC code and run length encoding. 10

(b) Find Huffman coding of following message ? 10

Message	x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8
Probability	0.25	0.25	0.14	0.14	0.055	0.055	0.055	0.055

Calculate code and its length ?

Download All Btech Stuff From StudentSuvidha.com