TDC (CBCS) Even Semester Exam., 2023

B.VOC (INFORMATION TECHNOLOGY)

(2nd Semester)

Course No. : BVOC/GE-203T

(Computer Network)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer ***one*** question from each unit

UNIT—I

1. *(a)* Briefly explain the different network topologies. 8

   (b) Define : 6

   (i) Peak amplitude

   (ii) Period and frequency

   (iii) Wavelength

(c) Distinguish between analog signal and digital signal. 3

2. (a) Briefly explain the following : 3×2=6

(i) Nyquist Bit Rate for a noiseless channel

(ii) Shannon capacity for a noisy channel

(b) Define Pulse Code Modulation (PCM). Explain different components of PCM. 11

UNIT—II

3. (a) Briefly describe circuit switch network. List out different phases of circuit switch network. 5+3=8

(b) Define : 3×3=9

(i) Routing Table

(ii) Virtual Circuit Identifier (VCI)

(iii) Time Slot Interchange (TSI)

4. (a) Define Digital Subscriber Line (DSL). Briefly explain the following DSL technologies : 9

(i) ADSL

(ii) VDSL

(iii) HDSL

(iv) SDSL

(b) Distinguish between upstream sharing and downstream sharing. 4

(c) Briefly explain cable TV Networks. 4

UNIT—III

5. (a) Define block coding. Describe the process of error detection using block coding. 2+6=8

(b) Describe framing. Briefly explain different types of framing. 6+4=10

6. (a) Distinguish between single-biterror and burst error. 5

(b) Define flow control and error control. Explain stop-and-wait protocol in detail. 3+10=13

UNIT—IV

7. (a) Write short notes on : 9

(i) DNS protocol

(ii) HTTP

(iii) FTP

(b) Explain classfull IP addressing in detail. 9

8. *(a)* Explain distance vector routing algorithm. 6

(b) Briefly explain IPv4 protocol. 6

(c) Describe the function of application layer protocol. 6

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