

09/10/2017

VCD F.Y.B.S.C (I.T.) - DCN - SEM-II - 75 - 2 $\frac{1}{2}$ HRS - PG

- NOTE:** 1) Diagrams should be Neat and labeled.
2) All Questions are compulsory.
3) Right side indicates marks.

Q.1) Attempt any two.

[10]

- Write short note on 1.DC 2. Analog and Digital signal.
- List components required for data communication .Explain It.
- What is composite signal? Explain with Fourier analysis concept.
- Explain key elements of protocols and Explain standards.

Q.2) Attempt any two.

[10]

- Describe TCP/IP suit.
- Describe OSI model.
- Find First, Last, and No of address of given address
11001101 00010000 00100101 00100111 (n=28)
- What is IP address? Describe different types of classes in IP address.

Q.3) Attempt any two.

[10]

- What is hamming distance for each of following code and also find out Minimum hamming distance.
1. d(10000,01000) 2. d(10101,10010) 3. d(1111,1111) 4. d(0000,0000)
- What is function of generator and checker in hamming code? Explain it.
- Describe JPEG process for video compression.
- What is one's compliment method in checksum? Explain with example.

Q.4) Attempt any two.

[10]

- Why signals are not perfect during transmission? Explain its causes.
- What is purpose of cladding in an optical fiber? Explain it with diagram.
- Explain serial and parallel transmission modes.
- Explain scrambling in digital-digital Conversion.

Q.5) Attempt any two.

[10]

- Define topology. Explain following topologies with advantages and disadvantages
1. Hybrid 2. RING 3. STAR
- What are two approaches required for packet switching? Explain it.
- Write short note on 1.message switching 2. Circuit switching
- Explain static and dynamic routing.

Q.6) Attempt any two.

[10]

- Write short note on 1.Unicast 2. Multicast 3. Anycast
- How to transit IPV6 to IPV4? Explain its mechanism.
- Differentiate IPV4 and IPV6.
- Describe ipv6.

Q.7) Attempt any three.

- A) Describe bipolar method.
- B) What is error ? Explain types of error.
- C) Differentiate guided and unguided media.
- D) Explain unipolar method.
- E) Explain AM, FM, PM.
- F) Describe unguided transmission media.

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