

People's Education Society's
Dr.Ambedkar College of Commerce & Economics, Wadala, Mumbai – 400 031
F.Y.B.Sc. (IT) Second Semester Examination, April 2016

Sub: DCN

Date: 16/04/2016

Marks: 75

Time: 2 ½ hrs.

Q 1. Attempt Any Two Of the following (10 marks)

- A) What is standards? Explain Standards Organization?
- B) Explain Data & Signals with the two types? also explain signal characteristics?
- C) Explain Bandwidth, Formula of Bandwidth and solve given Example:
A Periodic signal has a bandwidth of 20 Hz. The highest frequency is 50 Hz , what Is the Lowest Frequency? Draw the Spectrum if the signal contains All frequencies of same Amplitude?

Q 2. Attempt Any one Of the following (10 marks)

- A) Write a short note on OSI Reference Model?
- B) Explain
 - a) IP addressing.
 - b) Three Phases of TCP.

Q 3. Attempt Any Two Of the following (10 marks)

- A) short note on compression also explain lossy and lossless compression with its three algorithm?
- B) Short note on multimedia blocks?
- C) Explain checksum and solve following example using checksum Technique:

(10110011 10101011 01011111 01011010) write conclusion that data accept or not?

Q 4. Attempt Any Two Of the following (10 marks)

- A) What is transmission modes? also explain each type of transmission modes in details?
- B) Write a short note on transmission impairments?
- C) What is modulation & demodulation also explain AM, FM and PM?

Q 5. Attempt Any Two Of the following (10 marks)

- A)i) Explain the concept of routing in brief ?
- B) Explain the concept of switching with circuit switching, packet switching and message switching?
- C) solve the Example using Cyclic Redundancy Check (Both sender & Receiver side):

Devisor	1101
Data Bits	100100

Q 6). Attempt Any One Of the following (10 marks)

A) Write short note on computer network and explain different types of topology (in Detail)?

B) Explain TCP/IP suit in detail?

Q 7). Attempt Any Three Of the following (Question A is Compulsory) (15 marks)

A) What are Communication Protocols and states its properties?

B) What is an Error? Explain types of Error and Error detection technique?

C) Write short note on signal also explain ADC in details.

D) Explain 5 component of data communication system?

E) Solve the Following Example using Huffman Encoding also define the code to Following Character of sequence?

Symbol	Frequency
A	24
B	12
C	10
D	8
E	8