Roll No._____ **ID: 180835/170835/120835/030835**

Semester: 3rd
Branch: Computer, IT
Subject: Data Communication

Time: 3hrs. **Max Marks 100**

Section –A

Note: Multiple Choice questions. All questions are compulsory. **10x1=10**

Q.1 The synchronous TDM is not efficient, because of
a) higher data rate b) infinite rate
c) empty slots d) lower data rate

Q.2 Which of the following is the type of signal propagation in unguided medium?
a) ground propagation b) sky propagation
c) line of sight propagation d) all of the above

Q.3 Which of the following is not a multi bit error?
a) 2 bit error b) 3 bit error
c) single bit error d) error

Q.4 Types of signal are
a) analog b) digital
c) both a and b d) none of the above

Q.5 Which of the following is not the technique for analog to analog modulation.
a) AM b) Delta modulation
c) FM d) PM

Q.6 Which is the best transmission media in guided transmission?
a) twisted pair b) coaxial cable
c) optical fibre d) radio wave

Q.7 Which are various types of data flow network?
a) simplex b) half duplex
c) full duplex d) all of the above

Q.8 Numbers that are written with base 10 are classified as-
a) decimal number b) whole number
c) hexadecimal number d) binary number

Q.9 What are performance criteria of network?
a) bandwidth b) throughput
c) latency d) all of the above

Q10 CRC method is used for-
a) row parity b) error detection
c) error correction d) column parity

Section-B

Note: Objective type questions. All questions are compulsory. **10x1=10**

Q.11 WAN stands for _____.
Q.12 _____ bits act as a redundant but that allow detection of errors in data.
Q.13 Define term throughput.
Q.14 Define composite signals.

Q.15 Name any three physical structure topologies.
Q.16 PCM stands for _____.
Q.17 What are advantages of optical fibre?
Q.18 What advantages coaxial cable have over twisted pair cable?
Q.19 What are burst errors?
Q.20 _____ conversion is the process of changing one of the characteristics of an analog signal based on information in the digital data.

Section –C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen questions. 12x5=60

Q.21 What is network topology?
Q.22 Why digital signal is better than analog signal?
Q.23 Define terms latency, bandwidth, jitter, throughput.
Q.24 Define periodic and aperiodic signal,
Q.25 Explain modulation with any one technique.
Q.26 Explain unguided transmission media.
Q.27 What is cyclic redundancy check method, explain
Q.28 State transmission characteristics of optical fibre.
Q.29 Explain digital to analog conversion.
Q.30 Explain the term bit rate and bit length.
Q.31 What are components of data communication?
Q.32 What are advantages of parallel transmission over serial transmission?
Q.33 Define various types of errors.
Q.34 Explain wavelength division multiplexing.
Q.35 Explain delta modulation.

Section-D

Note: Long answer type questions. Attempt any two questions out of three questions. 2x10=20

Q.36 What is role of multiplexing in data communication? Explain various multiplexing techniques in detail.
Q.37 Explain briefly the term transmission media. Compare guided and unguided transmission media in detail.
Q.38 Define term error, error detection, error correction and explain the method to correct double bit error.