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Roll No. /030835

**3rd Sem / Comp., IT
Subject:- Data Communications**

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Which of the following is the components of data communication. (CO1)
a) Sender b) Receiver
c) Protocol d) All of above

Q.2 Network components are connected to the same cable in the _____ topology. (CO1)
a) Mesh b) Bus
c) Star d) Ring

Q.3 Which of the following parameters is not related with network performance. (CO2)
a) Jitter b) Throughput
c) Latency d) Analog

Q.4 _____ parameter is not related with the characteristics of analog signals. (CO2)
a) Amplitude b) Modem
c) Frequency d) Phase

Q.5 Which of the following scheme is not related with analog to analog conversion. (CO3)
a) Amplitude modulation
b) Pulse modulation

(1) 180835/170835/120835
/030835

- c) Frequency modulation
d) Phase modulation

Q.6 FSK is the example of which type of conversion.
(CO3)

a) Analog to analog b) Digital to analog
c) Analog to digital d) None of above

Q.7 Which of the following is not a type of multiplexing.
(CO4)

a) ADM b) FDM
c) TDM d) WDM

Q.8 _____ not a type unguided transmission media.
(CO5)

a) Fiber Optics b) Microwave
c) Radio wave d) Infrared

Q.9 The following technique is not the part of error detection.
(CO6)

a) Parity checking b) Checksum
c) CRC d) Bitcode

Q.10 The signal rate is sometimes also called as _____ rate.
(CO2)

a) Baud b) Bit
c) Signal d) None of above

SECTION-B

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

Q.11 In _____ mode the data can flow in both the direction but only one is possible at a time. (CO1)

Q.12 _____ is the time taken by the whole message to travel from the sender to the receiver. (CO2)

(2) 180835/170835/120835
/030835

- Q.13 List the name of any two causes behind impairments. (CO2)
- Q.14 Phase shift keying is a type of digital to analog conversion. (T/F) (CO3)
- Q.15 In _____ transmission, the set of bits are transmitted simultaneously from the sender and receiver. (CO3)
- Q.16 WDM stands for _____. (CO4)
- Q.17 Microwave is a type of guided media. (T/F) (CO5)
- Q.18 List any two types of unguided media. (CO5)
- Q.19 _____ bits acts as redundant bit that helps in error detection. (CO6)
- Q.20 CRC stands for _____. (CO6)

SECTION-C

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

- Q.21 Explain LAN along with its diagram and advantages. (CO1)
- Q.22 Explain terms amplitude, frequency and phase in context to analog signals. (CO2)
- Q.23 Explain any two parameters related with the network performance. (CO2)
- Q.24 What do you mean by digital to analog conversion. Explain its any one technique. (CO3)
- Q.25 Explain pulse code modulation in brief with diagram. (CO4)
- Q.26 Explain the concept of FDM with the help of diagram. (CO4)
- Q.27 Differentiate between fiber optics and coaxial cables. (CO5)

(3) 180835/170835/120835
/030835

- Q.28 What is analog to analog conversion. Explain its any one technique. (CO3)
- Q.29 What are analog signals. Explain periodic and aperiodic analog signals. (CO2)
- Q.30 Explain in brief the transmission of digital signals. (CO2)
- Q.31 What is NRZ. Explain various NRZ schemes with example. (CO3)
- Q.32 Explain the term multiplexing in context with data communication. (CO4)
- Q.33 Differentiate between synchronous and asynchronous TDM. (CO4)
- Q.34 Differentiate between serial and parallel transmission. (CO3)
- Q.35 Explain different types of errors that occurs during data transmission. (CO6)

SECTION-D

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

- Q.36 What is data communication. Explain its various components in detail. (CO1)
- Q.37 What is error detection through parity bit. Discuss how block parity is used to detect double errors and correct single errors. (CO6)
- Q.38 What do you mean by unguided media. Explain any two types of unguided media in detail. (CO5)
- (Note:** Course outcome/CO is for office use only)

(2920) (4) 180835/170835/120835
/030835