

C. U. SHAH UNIVERSITY

Winter Examination-2021

Subject Name: Data Communication and Networks**Subject Code: 2TE04CNN1****Branch: Diploma (CE)****Semester : 4****Date : 20/10/2021****Time : 11:00 To 02:00****Marks : 70**

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

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- Q-1** **Attempt the following questions:** **(14)**
- a) Switch is used at which network layer? **1**
A) Datalink layer B) Physical C) Network D) Application
- b) Which is not an application layer protocol? **1**
a) HTTP b) SMTP c) FTP d) TCP
- c) A _____ set of rules that governs data communication. **1**
a) Protocols b) Standards c) RFCs d) Servers
- d) Communication between a computer and a keyboard involves _____ transmission. **1**
a) Automatic b) Half-duplex
c) Full-duplex d) Simplex
- e) Bluetooth is an example of _____ **1**
a) personal area network b) local area network
c) virtual private network d) wide area network
- f) Application layer offers _____ service. **1**
a) End to end
b) Process to process
c) Both End to end and process to process
d) None of the mentioned
- g) In IPv4 Addresses, classful addressing is replaced by _____ **1**
a) Classless Addressing b) Classful Addressing
c) Classful Advertising d) Classless Advertising
- h) DNS database contains _____ **1**
a) name server records b) hostname-to-address records
c) hostname aliases d) all of the mentioned
- i) What is server? **1**
- j) What is Access point? **1**
- k) True/False: IPv4 is 32-bit protocol. **1**
- l) For sending mail, which protocol is used? **1**
a) SMTP b) HTTP
c) FTP d) SIP
- m) How many byte are there in the Ethernet address? **1**



- A) 2 B) 4 C) 6 D) 7
- n) Which of this is not a class of IP address? 1
- a) Class E b) Class C
- c) Class D d) Class F

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt following Question**
- (a) Write short note on different types of Transmission media. 7
- (b) What is DNS? Explain its different types. 7
- Q-3 Attempt following Question**
- (a) Write short note on different types of servers. 7
- (b) Draw and explain OSI model. 7
- Q-4 Attempt following Question**
- (a) What is topology? Explain different type of topology. 7
- (b) Write short note on FTP and POP3. 7
- Q-5 Attempt following Question**
- (a) Explain following network device in detail: NIC, Repeater, Hub, Switch, Router, Gateway. 7
- (b) Compare TCP Vs. UDP. 7
- Q-6 Attempt following Question**
- (a) Write short note on classification of IP Address(Classful addressing). 7
- (b) Write short note on subnet Masking. 7
- Q-7 Attempt following Question**
- (a) Explain different category of Computer network. 7
- (b) Write short note on: Components of Data Communication. 7
- Q-8 Attempt following Question**
- (a) What is data communication? Write down it characteristic 7
- (b) Explain Connection Oriented and Connectionless Approach. 7



Q-1

Attempt the following questions:

(14)

- a) કયા નેટવર્ક લેયરમાં સ્વિચનો ઉપયોગ થાય છે? 1
A) Datalink layer B) Physical C) Network D) Application
- b) એપ્લિકેશનલેયરપ્રોટોકોલકયુંનથી? 1
a) HTTP b) SMTP c) FTP d) TCP
- c) _____ નિયમોનોસમૂહજેડેટાસંચારનુંસંચાલનકરેછે. 1
a) Protocols b) Standards c) RFCs d) Servers
- d) કમ્પ્યુટર અને કીબોર્ડ વચ્ચેના સંચારમાં _____ ટ્રાન્સમિશનનો સમાવેશ થાય છે. 1
a) Automatic b) Half-duplex
c) Full-duplex d) Simplex
- e) બ્લૂટૂથ _____ નું ઉદાહરણ છે 1
a) personal area network b) local area network
c) virtual private network d) wide area network
- f) એપ્લિકેશન લેયર _____ સેવા આપે છે. 1
a) End to end
b) Process to process
c) Both End to end and process to process
d) None of the mentioned
- g) IPv 4એડ્રેસમાં, ક્લાસકુલએડ્રેસિંગને_____ દ્વારાબદલવામાંઆવેછે 1
a) Classless Addressing b) Classful Addressing
c) Classful Advertising d) Classless Advertising
- h) DNS ડેટાબેઝમાં_____ છે 1
a) name server records b) hostname-to-address records
c) hostname aliases d) all of the mentioned
- i) સર્વરશુંછે? 1
- j) એક્સેસપોઇન્ટશુંછે? 1
- k) સાચું/ખોટું :IPv32 4-બીટપ્રોટોકોલછે. 1
- l) મેઇલમોકલવામાટે, કયાપ્રોટોકોલનોઉપયોગથાયછે? 1
a) SMTP b) HTTP
c) FTP d) SIP
- m) ઇથરનેટસરનામાંમાંકેટલાબાઇટછે? 1
A) 2 B) 4 C) 6 D) 7
- n) આમાંથીકયોIP એડ્રેસનોવર્ગનથી? 1
a) Class E b) Class C
c) Class D d) Class F



Attempt any four questions from Q-2 to Q-8

Q-2	Attempt following Question	
(a)	વિવિધ પ્રકારના પ્રસારણ માધ્યમો પર ટૂંકી નોંધ લખો.	7
(b)	DNS શું છે? તેના વિવિધ પ્રકારો સમજાવો.	7
Q-3	Attempt following Question	
(a)	વિવિધ પ્રકારના સર્વરો પર ટૂંકી નોંધ લખો.	7
(b)	OSI મોડેલ દોરો અને સમજાવો.	7
Q-4	Attempt following Question	
(a)	ટોપોલોજી શું છે? વિવિધ પ્રકારની ટોપોલોજી સમજાવો.	7
(b)	FTP અને POP 3 પર ટૂંકીનોંધ લખો.	7
Q-5	Attempt following Question	
(a)	નીચેના નેટવર્ક ઉપકરણને વિગતવાર સમજાવો :એનઆઈસી, રીપીટર, હબ, સ્વિચ, રાઉટર, ગેટવે.	7
(b)	TCP ની તુલના કરો UDP સાથે.	7
Q-6	Attempt following Question	
(a)	IP એડ્રેસ) ક્લાસકુલએડ્રેસિંગ (ના વર્ગીકરણ પર ટૂંકી નોંધ લખો.	7
(b)	સબનેટ માસ્કિંગ પર ટૂંકી નોંધ લખો.	7
Q-7	Attempt following Question	
(a)	કમ્પ્યુટર નેટવર્કની વિવિધ શ્રેણી સમજાવો.	7
(b)	ટૂંકી નોંધ લખો :ડેટા કોમ્યુનિકેશનના ઘટકો.	7
Q-8	Attempt following Question	
(a)	ડેટા કમ્યુનિકેશન શું છે? તેની લાક્ષણિકતા લખો.	7
(b)	કનેક્શન ઓરિએન્ટેડ અને કનેક્શનલેસ એપ્રોચ સમજાવો.	7

