

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2022

Subject Name: Networking Essentials

Subject Code: 4CS04INE1

Branch: B.Sc.I.T.

Semester: 4

Date: 05/05/2022

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) OSI stands for _____
- A. Operating System Interface B. Optical System Interface
 C. Operating System Internet D. Open System Interconnection
- b) How many layers are there in OSI reference mode?
- A. 3 B. 5
 C. 7 D. 9
- c) What is HUB?
- A. Software B. Computing Device
 C. Network device D. Calculating Device
- d) What does a set of rules defined?
- A. SMTP B. FTP
 C. IMAP D. Protocol
- e) Which protocol is primarily used for browsing data?
- A. FTP B. TCP
 C. TFTP D. HTTP
- f) Which was the first network based on TCP/IP Protocol?
- A. ARPANET B. HUB
 C. Ethernet Card D. Router
- g) TCP/IP stands for _____
- A. Telephone Control Protocol/ Internet Protocol
 B. Transmission Control Protocol / Internet Protocol
 C. Transmission Control Protocol / International Protocol
 D. None of these
- h) Identify the incorrect network topology.



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|----|---|---------------------|
| | A. Bus | B. Star |
| | C. P2P | D. Ring |
| i) | What is the length of IPV4 address? | |
| | A. 28 | B. 32 |
| | C. 64 | D. 128 |
| j) | Which network device is used to connect two dis- similar types of networks? | |
| | A. switch | B. Hub |
| | C. Bridge | D. Gateway |
| k) | Which device is used to boost up a weak signal? | |
| | A. Modem | B. Repeater |
| | C. Switch | D. Router |
| l) | MAC address is of _____ bits | |
| | A. 8 | B. 16 |
| | C. 32 | D. 48 |
| m) | Which of the following device is used in the network layer? | |
| | A. Application gateway | B. switch |
| | C. Router | D. Repeater |
| n) | In ____ switching method, the message is divided into small packets. | |
| | A. Virtual switching | B. Packet switching |
| | C. Message switching | D. None of these |

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

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|------------|--|-------------|
| Q-2 | Attempt all questions | (14) |
| a) | Explain Simplex, Half-duplex, and Full duplex modes with diagram. | (7) |
| b) | Explain OSI reference model with each later. | (7) |
| Q-3 | Attempt all questions | (14) |
| a) | Explain CSMA/CD with diagram. | (7) |
| b) | Explain parallel communication and serial communication. | (7) |
| Q-4 | Attempt all questions | (14) |
| a) | Explain FDM and TDM in detail. | (7) |
| b) | Explain twisted pair cable and coaxial cable in detail. | (7) |
| Q-5 | Attempt all questions | (14) |
| a) | Explain message switching and packet switching in detail. | (7) |
| b) | What is topology? List out various topologies. Explain star and mesh and ring in detail. | (7) |
| Q-6 | Attempt all questions | (14) |
| a) | Explain router and gateway in detail. | (7) |



b) What is error? Explain types of error in detail. (7)

Q-7 **Attempt all questions** (14)

a) Explain analog transmission and digital transmission in detail. (7)

b) Explain Infrared and Bluetooth in detail. (7)

Q-8 **Attempt all questions** (14)

a) Explain LAN & WAN in detail. (7)

b) Explain microwave and satellite communication. (7)

