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**Question Paper Code: U4202**

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Fourth Semester

Computer science and Engineering

21UCS402 COMPUTER NETWORKS

(Common to CSD & Information technology)

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (5 x 1 = 5Marks)

1. In TDM, the transmission rate of the multiplexed path is usually \_\_\_\_\_ the sum of the transmission rates of the signal sources. CO1-U  
(a) equal to                      (b) less than                      (c) greater than                      (d) not related to
2. What is the hexadecimal equivalent of the Ethernet address 01011010 00010001 01010101 00011000 10101010 00001111? CO1-U  
(a) 5A:81:BA:81:AA:0F                      (b) 5A:11:55:18:AA:0F  
(c) 5A:88:AA:18:55:F0                      (d) 5A:18:5A:18:55:0F
3. Transmission from Earth to satellite is called the CO1-U  
(a) Up-link                      (b) Down-link                      (c) Low-link                      (d) High-link
4. The ability of a single network to span multiple physical networks is known as \_\_\_\_\_. CO1-U  
(a) Sub netting                      (b)Masking                      (c)Fragmenting                      (d) Hopping
5. This is not an application layer protocol CO1-U  
(a) HTTP                      (b) SMTP                      (c) FTP                      (d) TCP

PART – B (5 x 3= 15 Marks)

6. What is the difference between a port address, logical address and physical address? CO1-U
7. Draw a hybrid topology with a ring backbone and three bus networks. CO1-U

8. What is the difference between IPv4 and IPv6? CO1-U
9. What is meant by quality of service? CO1-U
10. What is the difference between a user agent (UA) and a mail transfer agent(MTA)? CO1-U

PART – C (5 x 16= 80 Marks)

11. (a) Explain in about Coaxial cable and fibre optic cable media for communication. CO1-U (16)
- Or
- (b) Explain briefly the different types of guided and unguided transmission media used for data transmission. CO1-U (16)
12. (a) Explain in detail about CSMA/CA with proper diagram. CO1-U (16)
- Or
- (b) Explain the various types of error. Discuss the various types of Detection and correction. CO1-U (16)
13. (a) Explain in detail about IPV4 and IPV6 header format. CO1-U (16)
- Or
- (b) Explain in detail about ICMP and IGMP CO1-U (16)
14. (a) Discuss in detail TCP Header Format, connection establishment and data transmission with the help of suitable diagram. CO1-U (16)
- Or
- (b) What is QOs in internetworking? State the techniques to improve QOS. CO1-U (16)
15. (a) Explain the concept of FTP in detail. CO1-U (16)
- Or
- (b) Define cryptography with the help of block diagram of symmetric and asymmetric key cryptography. CO1-U (16)