

DURATION: - 2 1/2 hrs

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MARKS:- 75

Note: - (1) All questions are compulsory.

(2) All questions carry equal marks.

(3) Figures to the right indicates full marks

Q.1 Attempt any three of the following

15M

- | | |
|--|---------|
| a) Describe the components of computer network | C01-(U) |
| b) Explain ring and hybrid topology | C01-(U) |
| c) Explain any three network classifications | C01-(R) |
| d) Describe transmission control protocol model | C01-(R) |
| e) Define: Gateway, router, network interface card | C01-(R) |
| f) Discuss OSI and TCP layers in details | C01-(U) |

Q.2 Attempt Any three of the following

15M

- | | |
|--|---------|
| a) Explain the position and function of physical layer | C02 (U) |
| b) Describe Attenuation, Distortion and Noise in signal | C02 (R) |
| c) Find the check sum of the following message
10110001, 10101011, 00110101, 101000001.
Show the sender and receiver side
The following is the original message | C02 (U) |
| d) 11000011, 10110010, 00101010, 10100011, 11100001,
11110011, 00001010, 00101011, 01001011. located it using
two dimensional parity check technique | C02 (U) |
| e) How to performance of the network can be increased | C02 (R) |
| f) Explain forward error correction technique and why is it used | C02 (U) |

Q.3 Attempt Any Three of the following

15M

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|---|---------|
| a) Explain network layer protocols | C03 (R) |
| b) Where network layer place and what are its duties? | C03 (R) |
| c) Explain transparent and non-transparent fragmentation with
neat labelled diagram | C03 (R) |
| d) The network address is 912.168.0.0/16 and 192. 168.5.2/24
Find the subnet mask, number of network bits and host bits,
total number of host address | C03 (U) |
| e) Describe CIDR notation | C03 (R) |
| f) Draw neat labelled diagram of IPv4 header format and describe
any four fields | C03 (U) |

Q.4 Attempt Any Three of the following

15M

- a) Define: packetizing, connection control, Addressing, flow control and error control CO4 (R)
- b) Explain Encapsulation and Decapsulation CO4 (R)
- c) Describe transport layer protocols CO4 (R)
- d) Difference between TCP and UPD CO4 (U)
- e) Explain header and data, source and destination port, total length and check sum CO4 (R)
- f) Explain user datagram protocol CO4 (R)

Q.5 Attempt Any Three of the following

15M

- a) Describe client server, peer to peer, Mixed paradigms CO5 (R)
- b) Explain world wild web CO5 (R)
- c) Where is application layer located and describe its duties CO5 (U)
- d) What is the format of message CO5 (R)
- e) Describe message transfer agent CO5 (R)
- f) Write a short note on POP and IMAP CO5 (R)
