

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER M.C.A DEGREE EXAMINATION (S), SEPT 2022

Course Code: 20MCAT104

Course Name: ADVANCED COMPUTER NETWORKS

Max. Marks: 60

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

- | | CO |
|--|-----------|
| 1. Explain client server architecture. | [1] |
| 2. What is the difference between transmission delay and propagation delay? | [1] |
| 3. Why does UDP use port number and not process id? | [2] |
| 4. Discuss about three-way handshaking in TCP. | [2] |
| 5. Write short note on IPV6. | [3] |
| 6. Compare virtual circuit and datagram subnets. | [3] |
| 7. Is the size of the ARP packet fixed? Justify your answer. | [4] |
| 8. Distinguish between communication at the network layer and data-link layer. | [4] |
| 9. Write short note on firewalls. | [5] |
| 10. Explain Network Address Translation (NAT). | [5] |

PART B

(Answer one full question from each module, each question carries 6 marks)

MODULE I

- | | CO | Marks |
|---|-----------|--------------|
| 11. Discuss about Quality of Service and the various methods used to achieve it with suitable diagrams. | [1] | (6) |

OR

- | | CO | Marks |
|--|-----------|--------------|
| 12. SMTP, FTP and HTTP are protocols to transfer messages from one point to another. Compare and contrast their use. | [1] | (6) |

MODULE II

- | | CO | Marks |
|--|-----------|--------------|
| 13. What is meant by reliability in data communication? How it is achieved in datagram networks? Compare the reliable data transfer protocol Go-Back-N and Selective repeat. | [2] | (6) |

OR

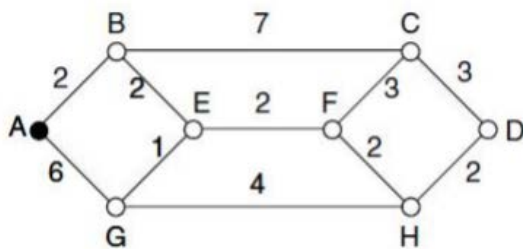
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|-----|---|-----------|--------------|
| | | CO | Marks |
| 14. | Write short notes on :
i)TCP segment format
ii)TCP services | [2] | (6) |

MODULE III

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|-----|---|-----------|--------------|
| | | CO | Marks |
| 15. | Describe the format of IPv4 datagram with the help of a diagram, highlighting the significance of each field. | [3] | (6) |

OR

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|-----|---|-----------|--------------|
| | | CO | Marks |
| 16. | Find the shortest path between A to D in the undirected graph given below using the link state routing algorithm. Solve the problem stepwise. | [3] | (6) |



MODULE IV

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|-----|---|-----------|--------------|
| | | CO | Marks |
| 17. | Define error detection and correction. What is redundancy? Explain how errors are detected using CRC. | [4] | (6) |

OR

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|-----|---|-----------|--------------|
| | | CO | Marks |
| 18. | Explain IEEE format of an Ethernet network with suitable diagram. | [4] | (6) |

MODULE V

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|-----|---|-----------|--------------|
| | | CO | Marks |
| 19. | Explain the functions of Wi-Fi and Bluetooth in detail. | [5] | (6) |

OR

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|-----|---|-----------|--------------|
| | | CO | Marks |
| 20. | Write a short note on:
a. Traffic analysis tools
b. Troubleshooting | [5] | (6) |
