

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**THIRD SEMESTER MCA DEGREE EXAMINATION, DECEMBER 2017**

**Course Code:RLMCA 201**

**Course Name: COMPUTER NETWORKS**

Max. Marks: 60

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 3 marks.*

Marks

- |   |  |     |
|---|--|-----|
| 1 | Explain the Basic Communication Model with neat diagram.   | (3) |
| 2 | Differentiate between Persistent and non-persistent connection.  | (3) |
| 3 | What are the transport layer services? Explain Multiplexing and Demultiplexing.  | (3) |
| 4 | Compare IPv4 and IPv6. How IPv6 solve the problem of IPv4 exhaustion?  | (3) |
| 5 | A series of 8-bit message blocks to be transmitted across a data link using CRC for error detection. A generator polynomial of $x^3+x^2+1$ is to be used. Message transmitted as 110010. Explain how CRC check is implemented? | (3) |
| 6 | Discuss about Switched and Bridged Ethernet.   | (3) |
| 7 | Explain about the various layers of Bluetooth.   | (3) |
| 8 | What you mean by VPN? Explain.   | (3) |

**PART B**

*Answer six questions, one full question from each module and carries 6 marks.*

**Module I**

- |   |   |     |
|---|---|-----|
| 9 | Explain about the layered architecture of OSI Reference model with the help of a neat diagram. What are the principal responsibilities of each of this layer? | (6) |
|---|---|-----|

**OR**

- |    |  |     |
|----|--|-----|
| 10 | What do you mean by QoS? Explain with the flow control mechanisms. | (6) |
|----|--|-----|

**Module II**

- |    |   |     |
|----|---|-----|
| 11 | Discuss about the MTA with the help of appropriate protocol. Give an example for MAA. | (6) |
|----|---|-----|

**OR**

- |    |  |     |
|----|--|-----|
| 12 | What is Socket Programming? Explain the echo server and echo client program using UDP. | (6) |
|----|--|-----|

**Module III**

- |    |   |     |
|----|---|-----|
| 13 | How reliability of data transfer is done in Transport Layer? Explain. | (6) |
|----|---|-----|

**OR**

- |    |  |     |
|----|--|-----|
| 14 | Explain the principles of Congestion control with its efficiency and fairness. | (6) |
|----|--|-----|

**Module IV**

- |    |  |     |
|----|--|-----|
| 15 | Explain the connection Management in Virtual Circuits with neat diagrams. What are the different classifications of VCs? | (6) |
|----|--|-----|

**OR**

- |    |   |     |
|----|---|-----|
| 16 | What is Routing? Explain Link state routing with OSPF protocol. | (6) |
|----|---|-----|

**Module V**

- 17 Discuss about Collision based Multiple access protocol. Compare it with token based Multiple access protocols. (6)

**OR**

- 18 Explain IEEE802.3 Ethernet with its access protocol. (6)

**Module VI**

- 19 Explain Wi-Fi Architecture. (6)

**OR**

- 20 Write a short note on: (6)

- i) Traffic analysis tools.
- ii) Trouble Shooting.

**\*\*\*\***