

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST/THIRD SEMESTER MCA DEGREE EXAMINATION, JULY 2018

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 | What is meant by a protocol? Enlist the three elements of protocol. | (3) |
| 2 | What is the purpose of conditional GET message in HTTP? | (3) |
| 3 | What is meant by handshaking? Which protocol implements handshaking mechanism? | (3) |
| 4 | What is subnet masking? Enlist the default mask used in classful addressing. | (3) |
| 5 | What is the difference between a hub and a switch? | (3) |
| 6 | List out all the services offered by the link layer. | (3) |
| 7 | How mobility is ensured in the same IP subnet? | (3) |
| 8 | How can collisions be avoided in the presence of hidden terminals? | (3) |

PART B

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

Module I

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|---|--|-----|
| 9 | a) What are the different layers of Internet model? | (4) |
| | b) Which are the new layers implemented by the OSI reference model? Quote its functionality. | (2) |

OR

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|----|---|-----|
| 10 | a) What are the components of basic communication system? | (3) |
| | b) What is meant by QoS? How it is implemented? | (3) |

Module II

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|----|---|-----|
| 11 | a) What is the difference between persistent HTTP with pipelining and persistent HTTP without pipelining? Which among these is default connection in HTTP 1.1 | (3) |
| | b) Mention the difference between recursive and iterative queries in DNS. | (3) |

OR

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|----|--|-----|
| 12 | a) Why does email application use Mail Access Protocol even when SMTP is already implemented for mail sending? | (2) |
| | b) What is the purpose of using MIME in e-mail application? | (4) |

Module III

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|----|---|-----|
| 13 | Demonstrate the following flow control mechanisms with suitable example-Go-Back-N and Selective Repeat. | (6) |
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OR

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|----|---|-----|
| 14 | a) Describe the UDP segment Structure with diagram. | (3) |
| | b) How is congestion control handled by TCP? | (3) |

Module IV

- 15 a) List the difference between classful and classless addressing. (4)
b) Why is IP said to provide best effort delivery service/? (2)

OR

- 16 a) Compare and contrast the header fields of IPv4 and IPv6. (3)
b) Explain the operation of RIP in the internet. (3)

Module V

- 17 What are the different error detection techniques used at the data link layer? (6)

OR

- 18 a) What are channel partitioning protocols? Indicate the difference between each category of channel partitioning protocol. (3)
b) Draw the Ethernet frame structure and mention the purpose of fields in it. (3)

Module VI

- 19 a) What are the principal components of network management architecture? (3)
b) How is GPRS different from CSMA? (3)

OR

- 20 a) Why are ACKs used in 802.11 but not in wired Ethernet? (2)
b) Briefly describe the WPAN (802.15) technology used in wireless network. (4)
