



Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B.TECH DEGREE EXAMINATION(R&S), MAY 2019

Course Code: CS306

Course Name: COMPUTER NETWORKS

Max. Marks: 100

Duration: 3 Hours

PART A*Answer all questions, each carries 3 marks.*

Marks

- | | | |
|---|------------------------------------------------------------------------|-----|
| 1 | Distinguish between interface, protocol and layer in network software. | (3) |
| 2 | What are point to point and broadcast networks? | (3) |
| 3 | Draw the different frame formats in HDLC. | (3) |
| 4 | How does pure aloha and slotted aloha differ? | (3) |

PART B*Answer any two full questions, each carries 9 marks.*

- | | | |
|---|------------------------------------------------------------|-----|
| 5 | a) List the design issues of layered network software. | (3) |
| | b) Explain WAN and communication subnet? | (3) |
| | c) Compare TCP/IP Reference model and OSI Reference model. | (3) |
| 6 | a) With neat diagram, explain OSI reference Model. | (6) |
| | b) Explain the working of CSMA/CD? | (3) |
| 7 | a) Explain how Token management is done in IEEE 802.5. | (3) |
| | b) Distinguish between switches and bridges. | (3) |
| | c) List the features of Gigabit Ethernet. | (3) |

PART C*Answer all questions, each carries 3 marks.*

- | | | |
|----|---------------------------------------------------------|-----|
| 8 | List the network layer functions. | (3) |
| 9 | Differentiate between Flooding and broadcasting | (3) |
| 10 | How token bucket algorithm performs congestion control? | (3) |
| 11 | List the private IP address ranges of class A, B and C? | (3) |

PART D*Answer any two full questions, each carries 9 marks.*

- | | | |
|----|---------------------------------------------------------------------------------------------|-----|
| 12 | a) Explain how routing is performed using link state algorithm? Illustrate with an example. | (6) |
| | b) Give the relevance of age field in a link state packet. | (3) |
| 13 | a) Explain any two congestion control algorithms | (5) |

- b) Discuss about the routing for mobile hosts. (4)
- 14 a) What is QoS? Explain any two methods to ensure QoS. (6)
- b) Subnet the Class C IP Address 206.16.2.0 so that you have 30 subnets. (3)
- What is the subnet mask for the maximum number of hosts?
- How many hosts can each subnet have?

PART E

Answer any four full questions, each carries 10 marks.

- 15 a) How does BGP avoid count to infinity problem? (3)
- b) Draw the IPv6 fixed header format. (3)
- c) Explain the role of ICMP. (4)
- 16 a) Define address resolution problem. Explain about RARP (6)
- b) Give the importance of BOOTP. (4)
- 17 a) Discuss about the issues with IPv6 (3)
- b) Explain how IGMP supports internet multicasting (7)
- 18 a) What are port numbers, give its importance in computer communication? (3)
- b) Distinguish between TCP and UDP header format. (7)
- 19 a) How FTP handles file transfer? (3)
- b) Explain various features of MIME? (4)
- ~~c) What is the role of SMTP in E Mail message transfer? (3)~~
- 20 a) Explain DNS message types (4)
- b) List the components of SNMP? (3)
- c) Explain the procedure for calculating the UDP checksum? (3)
