

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)
