Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIFTH SEMESTER B.TECH DEGREE EXAMINATION(R&S), DECEMBER 2019

Course Code: IT307

Course Name: Computer Networks

Max. Marks: 100 Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks. Marks

1	a)	Classify different types of Computer Networks.	(3)
	b)	How do burst errors occur? How can we use Hamming Code to deal with burst errors?	(8)
	c)	How is piggybacking useful? What are the overheads introduced by it?	(4)
2	a)	Show how TCP/IP reference Model incorporates the functions of all seven layers of the OSI Model.	(7)
	b)	How is a generator polynomial selected for CRC?	(4)
	c)	Write short notes on Fiber Optics technology.	(4)
3	a)	Explain the characteristics and need of communication satellites.	(5)
	b)	Explain the concept of Go-Back N and Selective Repeat Protocols.	(6)
	c)	Compare between repeaters, hubs and switches.	(4)

PART B

Answer any two full questions, each carries 15 marks.

4	a)	Explain static channel allocation techniques.	(5)
	b)	List the Fast and Gigabit Ethernet standards.	(4)
	c)	What causes jitter? How is it controlled?	(6)
5	a)	Write short notes on multicast routing principles	(6)
	b)	What is the rationale behind p-persistent CSMA?	(3)
	c)	Derive expressions for efficiency of ALOHA variants.	(6)
6	a)	What is QoS? Explain.	(5)
	b)	How is differential Manchester encoding superior to Manchester encoding?	(6)
	c)	What is the relevance of choke packets in networks?	(4)

PART C

Answer any two full questions,each carries 20 marks.

7	a)	Explain how connection establishment and release is done in TCP. Explain the time states involved.	(9)
	b)	Describe UDP header composition and its features.	(6)
	c)	Describe the concept and need of Cookies.	(5)
8	a)	How are browser plug-ins and helper applications implemented? How do they differ?	(8)
	b)	Write short notes on Electronic mail and its protocols	(6)
	c)	Illustrate the use of socket primitives based on a client server interaction.	(6)
9	a)	Describe the concept of HTTP Message formats	(7)
	b)	How does TCP deal with congestion?	(8)
	c)	What happens in FTP if the control connection breaks, while the data connection does not?.	(5)

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