Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER–IV • EXAMINATION – WINTER - 2018

Subject Code: 2640001 Date: 16/11/2018

Subject Name: Fundamentals of Networking

Time:10:30 AM TO 01:00 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 **(a)** Answer the following questions **07**

1) Name two layers not present in TCP/IP model and present in OSI
2) What is a time out event?
3) Represent 1010 using amplitude modulation
4) What is a network interface card?
5) What is a composite signal?
6) What is an electromagnetic spectrum?
7) What is a flag byte?

(b) Answer the following questions **07**

1) Write one important difference between selective repeat and go back n
2) What is a DCF mode in wireless communication?
3) What is the full form of RED?
4) What is the job of DNS?
5) Framing is the responsibility of _____ layer in OSI Model.
6) _____ is a device that reshapes a digital signal. (Amplifier, Repeater)
7) Ethernet frame contain a field called checksum which can tell if there are any modifications during the transit. (T/F)

Q.2 **(a)** What is delayed duplicates problem? Explain Three-way handshake Method to establish a connection. **07**

(b) Explain Hidden Station and Exposed Station problem. What is its solution in wireless communication? **07**

OR

(b) Define Total internal reflection principal. Explain how fiber optic cable uses it to transmit data. **07**

Q.3 **(a)** What is resource record? Discuss types of resource records. **07**

(b) Differentiate: 802.11 and 802.16 Physical layers. **07**

OR

Q.3 **(a)** Explain the Layers of Bluetooth Protocol Stack. **07**

(b) Compare UTP and Fiber Optic. **07**

Q.4 **(a)** What is Collision? How to restore transmission after a collision occurs? **07**

(b) Differentiate Distance Vector Vs. Link State Routing **07**

OR

Q.4 **(a)** Explain BGP in Detail **07**

(b) How Gigabit Ethernet Works? Explain in detail. **07**

Q.5 **(a)** Explain OSI reference model in detail. **07**

(b) 1) Compare Selective Repeat and Go back n **03**

2) Compare Data link layer and transport layer **04**

OR

Q.5	**(a)**	What is multiplexing? Explain types of multiplexing in detail.	**07**
	(b)	1) Compare Byte Stuffing And Bit Stuffing	**04**
		2) How connection management is performed at transport layer?	**03**

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