

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER- IV EXAMINATION – SUMMER - 2017

Subject Code: 3640002

Date: 01-06-2017

Subject Name: Basic Computer Science -3 (Computer Networking)

Time: 10:30 am - 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)** Write any seven in one or two sentences **07**
1. Explain footprint.
 2. What is meant by : a) WAN b) PAN
 3. Explain distributed system
 4. What is forwarding?
 5. In reference to DNS explain zone?
 6. What is DNS poisoning?
 7. What is PIFS?
 8. Explain : Partially qualified domain name
- (b)** Write any seven in one or two sentences **07**
1. What do you mean by flow control?
 2. Explain real-time polling service?
 3. Data link layer is divided into how many layer? Name them.
 4. What is piconet?
 5. How many satellites are allowed in geosynchronous orbit?
 6. What is jitter?
 7. What is an access point?
 8. Define term resolver at application layer.
- Q.2 (a)** Write any seven in one or two sentences **07**
1. What is need for DNS in internet?
 2. Explain routing table?
 3. What are two most important functions of the network layer?
 4. Differentiate between Hub and Switch.
 5. What is SOF?
 6. Name the layer of TCP/IP?
 7. Explain the term 'baud rate'.
 8. What is the major drawback of Single Bit Parity check method for error detection?
- (b)** Write any two **07**
1. Explain FDM & TDM.
 2. Explain Byte Stuffing method in brief
 3. Why selective repeat requires exclusive sequence numbers in alternate cycles?
- OR**
- (b)** Write any two **07**
1. What is a no monopoly idea? How framing helps?
 2. Explain in brief sliding window protocol?
 3. Explain how RTS-CTS exchange help solve exposed station problem
- Q.3 (a)** 1. Explain in brief advantages of layering? **04**

	2. Write short note on applications of sensor networks?	03
(b)	1. Write short note on electromagnetic spectrum?	04
	2. Write the difference between Fiber Optics and Satellite Communication	03
OR		
Q.3	(a) 1. Explain in brief network categories based on connection.	04
	2. Explain in brief difference between analog and digital signaling?	03
	(b) 1. Explain in brief duties of Physical layer?	04
	2. Explain Propagation mode of Fiber Optic cable.	03
Q.4	(a) Write any two	07
	1. Explain in brief Binary Exponential Back off algorithm?	
	2. What is Ethernet? Why Ethernet, worked on the same principle as Aloha, perform far better?	
	3. Explain how the 802.11 works in PCF mode?	
	(b) Write any two	07
	1. Explain Link State Routing Algorithm.	
	2. Explain in brief connection-oriented forwarding using virtual circuit?	
	3. Write a note on network layer switching.	
OR		
Q.4	(a) Write any two	07
	1. Explain Inter Frame Spacing of 802.11 MAC Layer.	
	2. Explain in brief 802.11 frame?	
	3. Differentiate between 802.11 and 802.16.	
	(b) Write any two	07
	1. Explain in brief routing in MANet?	
	2. Explain optimality principal for routing algorithms at network layer?	
	3. Explain in brief Border gateway protocol.	
Q.5	(a) 1. Explain in brief duties of Transport Protocol?	04
	2. With reference to TCP, explain Persist Timer and Fin-Wait-2 Timer?	03
	(b) 1. Explain in brief each field of Bluetooth frame structure.	04
	2. What is conditional download w.r.t. HTTP? Explain with example	03
OR		
Q.5	(a) 1. Explain blue army problem in connection release in transport layer.	04
	2. Give comparison between a transport layer and data link layer.	03
	(b) 1. Explain in brief HTTP query and response?	04
	2. Give at least three advantages of hierarchy used in DNS.	03
