USN ☐☐☐☐☐☐☐☐☐☐

18CS52

Fifth Semester B.E. Degree Examination, July/August 2021
Computer Networks and Security

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1	a.	Describe HTTP with persistent and non-persistent connections.	(10 Marks)
	b.	Write a note on web caching.	(05 Marks)
	c.	Explain SMTP with example.	(05 Marks)
2	a.	Define a Socket. Describe the socket programming using TCP.	(10 Marks)
	b.	Describe in detail the services provided by DNS and explain the DNS message format.	(10 Marks)
3	a.	Illustrate TCP and UDP segment structure with a help of diagram.	(10 Marks)
	b.	With an FSM, explain the three phases of congestion control.	(10 Marks)
4	a.	Explain the stop and wait protocol with FSM representation rdt2.1.	(10 Marks)
	b.	Explain the concept of transport layer multiplexing and De-Multiplexing.	(10 Marks)
5	a.	What is routing? Explain the structure of router.	(10 Marks)
	b.	Explain 1PV4 datagram format with neat diagram.	(10 Marks)
6	a.	Explain Dijkstra's algorithm with example.	(10 Marks)
	b.	Discuss the 1PV6 packet format.	(06 Marks)
	c.	List the broadcast routing algorithms. Explain any one of them.	(04 Marks)
7	a.	Explain four types of internet infrastructure attacks in Network security.	(10 Marks)
	b.	What is secret-key encryption protocols? Explain DES algorithm.	(10 Marks)
8	a.	Discuss the secure Hash Algorithm.	(05 Marks)
	b.	Explain IP security and 1Psec.	(05 Marks)
	c.	Explain RSA Algorithm. Using RSA algorithm encrypt a message M = 9. Assume p = 3 and q = 11. Find public and private keys and also show the cipher text.	(10 Marks)
9	a.	List the categories of streaming stored video. Explain one of them.	(10 Marks)
	b.	Bring out the leaky bucket mechanism for traffic policing.	(10 Marks)
10	a.	Write a short notes on: i) Netflix video streaming platform ii) VOIP with skpe.	(10 Marks)
	b.	Explain the types of multi media network applications.	(10 Marks)

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