CBCS	Scheme
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USN

CS52

Fifth Semester B.E. Degree Examination, Dec.2017/Jan.2018

Computer Networks

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

Compare client server and Perl-to-Peer architecture. (05 Marks) Describe HTTP with persistent and non-persistent connections (08 Marks) What are the services provided by DNS? (03 Marks)

OR

Demonstrate socket implementation using TCP. (08 Marks) Write a note on web caching. (04 Marks) Illustrate the basic operation of SMTP with an example. (04 Marks)

Module-2

- Elaborate the three way handshaking in TCP. 3 (05 Marks) Discuss Go-Back N protocol. (06 Marks) (05 Marks)
 - Explain the connection-oriented multiplexing and de-multiplexing.

OR

- State congestion and discuss the cause of congestion. a. (04 Marks) With a neat diagram, explain the TCP segment structure b. (08 Marks)
 - Suppose that two measured sample RTT values are 106 ms and 120 ms. Compute:
 - i) Estimated RTT after each of these sample RTT value is obtained. Assume $\alpha = 0.125$ and estimated RTT is 100 msec just before first of the samples obtained.
 - ii) Compute DevRTT.

Assume $\beta = 0.25$ and DevRTT was 5 msec before first of these samples are obtained.

(04 Marks)

Module-3

Write the link-state routing algorithm. Solve the following graph using link-state algorithm 5 with source node 'u'.

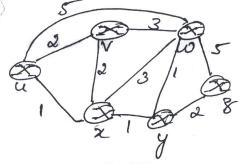


Fig.Q5(a)

(08 Marks)

What is routing? Explain the structure of a router.

(08 Marks)

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6	a. 🤇	Discuss the IPV6 packet format.	(05 Marks)	
Ü	b.	Elaborate the path attributes in BGP and steps to select the BGP routes.	(05 Marks)	
	c.	List the broadcast routing algorithms. Explain any one of them.	(06 Marks)	
		Module-4		
7	a.	Show the components of GSM 2G cellular network architecture with a diagram.	(07 Marks)	
	b.	Illustrate the steps involved in mobile IP registration with home agent.	(05 Marks)	
	c.	Write a note on mobile IP.	(04 Marks)	
		50		
		(a)		
		OR		
8	a.	Define Handoff. Explain the steps accomplishing a handoff.	(07 Marks)	
	b.	Bring out the mechanism of direct routing to mobile node in mobility management	nt.	
			(06 Marks) (03 Marks)	
	C.	Compare the 4G LTE standard to 3G systems.	(US Marks)	
		Module-5	(03 Marks)	
9	a.	Elaborate the features of streaming stored video.	(08 Marks)	
	b.	With a neat diagram, explain the CDN operation.	(05 Marks)	
	c.	Summarize the limitations of Best-effort IP service.	(US Marks)	
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4.0		OR	(05 Marks)	
10	a.	Explain the diffserv internet architecture.	(06 Marks)	
	b.	Describe the leaky bucket policing mechanism	(05 Marks)	
	c.	Discuss the round-robin and waited fair queuing scheduling mechanism.	(05 Marks)	

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