



COLLEGE OF ENGINEERING, PUNE

(An Autonomous Institute of Government of Maharashtra.)
SHIVAJI NAGAR, PUNE - 411 005

END Semester Examination

(IT-09001) Network Architecture and Wireless Protocol

Course: B.Tech

Branch: Information Technology

Semester: Sem V

Year: 2014-2015

27 NOV 2014

Max.Marks:60

Duration: 3 Hours

Time:-

2:00 to 5:00 p.m

Date:

Instructions:

MIS No.

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1. Answer all questions.
2. Figures to the right indicate the full marks.
3. Mobile phones and programmable calculators are strictly prohibited.
4. Writing anything on question paper is not allowed.
5. Exchange/Sharing of anything like stationery, calculator is not allowed.
6. Assume suitable data if necessary.
7. Write your MIS Number on Question Paper

		Marks
Q. 1.	A. An organization is granted the block 54.16.0.0/24. The administrator wants to create 1024 address for its users. a. Find the subnet mask b. Find the max number of address he can allocate c. Find the first and last addresses in the subnet	06
	B. What is TTL? Why is it needed?	02
	C. Find the class of the following IP addresses a. 237.12.14.31 b. 114.34.12.48	02
Q.2.	A. What is routing? How would you differentiate with switching?	03
	B. What is Distance Vector protocol? Give an example of its implementation.	04
	OR	
	B. What is link state protocol? Give an example of its implementation.	04
	C. Why is distance vector and link state protocols unsuitable for inter-domain routing protocols? Cite the characteristics and operation of one inter-domain routing protocol?	03
Q.3	A. TCP is sending data at 2 MBps. If the sequence number starts with 7000, how long does it take before the sequence number goes back to zero?	03

OR		
	A.	Illustrate any 3 fields that are missing in UDP and present in TCP. Give the reasons for its absence. 03
	B.	What is Transmission Sequence Number? 01
	C.	Why is source and destination port number (Port addresses) required for a process to process delivery of messages? 03
	D.	Describe TCP Connection Termination sequence. Why nothing of this sort exists in UDP. 03
Q.4	A.	How 802.11 achieves Reliable Delivery through MAC frames. 05
	B.	What is association request and association response in reference to wireless networks? 03
	C.	What is an adhoc network? 02
Q.5	A.	Illustrate the functions/roles of components in a Network Management System, with a diagram. 05
	B.	Which version of SNMP is more secure SNMPv3, SNMPv2 or SNMPv1? 02
	C.	What are the functions of Structure of Management Information version 2 (SMIv2)? 03
Q.6	A.	Why do we need POP3 and IMAP4 for electronic mail? 04
	B.	What is SMTP? 02
	C.	Why is connection establishment for mail transfer needed if TCP has already established a connection? 04