

Exam. Code: 0916
Sub. Code: 33417

2055

B.E. (Computer Science and Engineering)

Fourth Semester

CS-404: Computer Networks

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Part.

x-x-x

I	<p>i) What is 100Base-TX? (1)</p> <p>ii) Briefly explain Dynamic alternate routing in circuit switched networks. (1)</p> <p>iii) Briefly explain the difference between Switch and Router. (1)</p> <p>iv) Briefly explain the main difference between broadcasting and multicasting. (1)</p> <p>v) What is CSMA/CA? (1)</p> <p>vi) A line has a signal to noise ratio of 1000 and bandwidth of 4000 KHz. What is the maximum data rate supported by this line? (1)</p> <p>vii) What is DHCP? (1)</p> <p>viii) Suppose that instead of using 16 bits for the network part of class B address originally, 20 bits had been used. How many class B networks would there have been? (1)</p> <p>ix) Briefly explain the purpose of DNS (Domain Name System). (1)</p> <p>x) Briefly give the difference between open loop and closed loop congestion control techniques. (1)</p>	
II	<p style="text-align: center;">PART-A</p> <p>a) Explain the differences between IEEE 802.4 and IEEE 802.5 standards in detail. (5)</p> <p>b) What is spread spectrum? Explain different types of spread spectrum with their diagrams. (5)</p>	
III	<p>a) What are Geostationary Earth Orbit (GEO) Satellites? (5)</p> <p>b) Explain main differences between OSI and TCP/IP reference models. (5)</p>	
IV	<p>a) Explain Hamming error correction protocol of Data Link layer. (5)</p> <p>b) Explain advantages, disadvantages and applications of Radio Waves in wireless transmission. (5)</p>	
	PART -B	
V	<p>a) (5)</p> <div style="text-align: center;"> </div> <p>Consider the subnet given in above figure. Distance vector routing is used, and the following vectors have just come in to router C: from B (5,0,8,12,6,2); from D (16, 12,6,0,9,10); and from E (7,6,3,9,0,4). The measured delays to B, D, and E are 6, 3, and 5 respectively. What is C's new routing table? Give both the outgoing line to use and the expected delay.</p> <p>b) Explain the working of Simple Mail Transfer Protocol (SMTP). (5)</p>	
VI	<p>a) Explain the concept of Token bucket algorithm in detail. (5)</p> <p>b) Explain frame format of UDP protocol. (5)</p>	
VII	<p>a) Explain different benefits of IPv6 over IPv4. (5)</p> <p>b) Explain the difference between 4G and 5G telecommunication networks. (5)</p>	

x-x-x