No. of Printed Pages : 2

CS-68

BACHELOR OF COMPUTER APPLICATIONS (BCA) (Pre-Revised)

Term-End Examination

00090 **December, 2017**

CS-68 : COMPUTER NETWORKS

Time : 2 hours *Maximum Marks : 60*

Note : *Question number **1** is **compulsory**. Attempt any **three** questions from the rest.*

1. (a) Write the maximum capacity of datagram that can be carried by the Internet protocol. Also, explain how IP datagrams are deleted from the network. *5*

(b) Why is circuit switching preferred over packet switching in voice communication ? Also, state the motivation for using packet switching in a data network. *6*

(c) How are collisions handled in Ethernet protocol ? Explain. *4*

(d) Why are both virtual path and virtual circuit used in ATM and how are they switched ? Explain with the help of an example. *7*

(e) Explain the concept of IP Subnetting and IP Supernetting. *3*

(f) What is the purpose of MAC sub-layer ? Explain the working of the sub-layer. *5*

2. (a) The main challenge with distance vector routing is 'count-to-infinity'. How does exchange of complete path from router to destination instead of delay, help in solving 'count-to-infinity' problem ? *6*

(b) Differentiate between persistent and non-persistent CSMA. *4*

3. (a) What is the purpose of sequence number in TCP segment ? Also, explain why padding is required in TCP segment. *6*

(b) Explain ICMP protocol with its different messages. *4*

4. (a) Explain the functionality of each layer of OSI model. *7*

(b) Compare and contrast between flow control and error control. *3*

5. Write short notes on the following : *10*

(a) ISDN

(b) Gateway

(c) IEEE 802.4

(d) DNS
