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CS-68

BACHELOR IN COMPUTER APPLICATIONS

BCA (PRE-REVISED)

Term-End Examination

June, 2019

CS-68 : COMPUTER NETWORKS

Time : 2 Hours *Maximum Marks : 60*

***Note :** Question No. 1 is compulsory. Answer any three questions from the rest.*

1. (a) With suitable examples, explain simplex, half-duplex and full duplex communications. 6

   (b) Explain each of the terms in ISDN. Who are the subscribers to BRI (Basic Rate Interface) ? 5

   (c) What is the purpose of DNS ? What type of domain names are used by any commercial and international organization ? 5

   (d) What is the fundamental difference between circuit switching and packet switching ? Which one is more appropriate for transmission of voice/data ? Explain. 7

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

2. (a) What is the limitation of step and wait retransmission strategy ? How is it overcome by Go back N protocol ? Explain its operation through an illustration. 6

(b) What are the following standards :

IEEE 802.3, IEEE 802.4 and IEEE 802.5

How do they differ in terms of network topologies and access methods ? Explain. 4

3. (a) What is ATM ? What are its benefits ? Explain. 4

(b) Describe the following with respect to transport layer : 6

(i) Qo S (Quality of Science)

(ii) Connection Establishment

(iii) Flow control and buffering

4. (a) List the important protocols of TCP/IP protocol suit corresponding to transport layer and application layers. Briefly describe their functionalities. 5

(b) Which transmission mode (simplex, half duplex and full duplex) is applicable for the following tasks ? 5

(i) Counselling session being conducted by a professor

(ii) A computer connected to a laser printer

(iii) A TV broadcast

(iv) Telephonic conversation

(v) A mouse connected to a computer

5. (a) Explain the purpose of the following fields of TCP header : 6

(i) Sequence number

(ii) Data offset

(iii) Windows

(iv) Checksum

(b) List the *five* main tasks a modem can perform. 4