3 (Sem–3/CBCS) CSC HC 3

2021

(Held in 2022)

COMPUTER SCIENCE

(Honours)

Paper : CSC–HC–3036

(Computer Networks)

Full Marks : 60

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Choose the correct answer of the following questions : 1×7=7

   (a) Bluetooth is an example of —

   (i) personal area network

   (ii) local area network

   (iii) virtual private network

   (iv) wide area network.

(b) Network congestion occurs —

(i) in case of traffic overloading

(ii) when a system terminates

(iii) when connection between two nodes terminates

(iv) in case of transfer failure.

(c) The structure or format of data is called :

(i) Syntax

(ii) Semantic

(iii) Struct

(iv) Formatting.

(d) Which transmission media provides the highest transmission speed in a network ?

(i) Coaxial cable

(ii) Twisted pair cable

(iii) Optical fiber

(iv) Electrical cable.

(e) CRC stands for —

(i) Cyclic Redundancy Check

(ii) Code Repeat Check

(iii) Code Redundancy Check

(iv) Cyclic Repeat Check.

(f) Which of the following is not a function of Network layer ?

(i) Routing

(ii) Internetworking

(iii) Congestion control

(iv) Error control.

(g) Transport layer protocol deals with —

(i) application to application communication

(ii) process to process communication

(iii) node to node communication

(iv) man to man communication

2. Define the following terms : ***(any four)*** 2×4=8

(i) Repeaters

(ii) Hubs

(iii) Switches

(iv) Router

(v) Gateways

(vi) Bridges

3. Answer the following questions : ***(any three)*** 5×3=15

(a) Discuss the OSI reference model.

(b) Write different multiplexing techniques.

(c) What is pulse code modulation ?

(d) Briefly explain Network switching techniques.

(e) Describe connection-oriented virtual circuit switching.

4. Answer the following questions : ***(any three)*** 10×3=30

(a) Explain the error detection and error correction techniques.

(b) Explain error recovery protocol.

(c) Write the routing algorithm.

(d) Discuss error and flow control.

(e) Explain Three-way handshake techniques.

(f) State and explain the DNS protocol.
