3 (Sem–3/CBCS) CSC HC 3

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 : ***(any seven)*** 1×7=7

   (a) The physical layer is responsible for

   (i) line coding

   (ii) channel coding

   (iii) modulation coding

   (iv) All of the above

(b) Which of the following task is not done by data link layer ?

(i) Framing

(ii) Error control

(iii) Flow control

(iv) Channel coding

(c) The network layer protocol for internet is _____.

(i) ethernet

(ii) internet protocol

(iii) hypertext transfer protocol

(iv) file transfer protocol

(d) Which of the following are transport layer protocols used in networking ?

(i) TCP and FTP

(ii) UDP and HTTP

(iii) TCP and UDP

(iv) HTTP and FTP

(e) Application layer is implemented in _____.

(i) end system

(ii) NIC

(iii) ethernet

(iv) packet transport

(f) TCP/IP model does not have _____ layer but OSI model have this layer.

(i) session layer

(ii) transport layer

(iii) application layer

(iv) network layer

(g) FTP is built on _____ architecture.

(i) client-server

(ii) P2P

(iii) data centric

(iv) service-oriented

(h) In _____ topology, every host is connected to a central hub.

(Fill in the blank)

(i) Full form of FDM is _____.

(Fill in the blank)

(j) Datagram is a connection oriented service.

*(State True **or** False)*

(k) Switch is an intelligent hub.

*(State True **or** False)*

(l) HTTP is a transport layer protocol.

*(State True **or** False)*

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

(i) VPN

(ii) WWW

(iii) Gateway

(iv) Telnet

(v) SMTP

(vi) Firewalls

(vii) Circuit switching

(viii) Ethernet

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

(a) What is layered network architecture ? Explain.

(b) Discuss different transmission media devices.

(c) Describe flow control protocol.

(d) Discuss CSMA/CD and CSMA/CA.

(e) What is Network Interface Card ?

(f) Give brief description of point to point protocol.

(g) Give brief description of a error detection technique.

(h) Explain the functions of transport layer.

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

(a) Write the IP addressing methods.

(b) Explain virtual circuits and datagram approach.

(c) State the transport layer protocols of TCP and UDP.

(d) Describe the application layer protocols and services.

(e) What is virtual private networks ?

(f) Discuss the error control protocol.

(g) Explain Go-Back-N ARQ protocol.

(h) Write short notes on :

(i) Virtual circuit switching

(ii) DNS protocol