2023

COMPUTER SCIENCE

Paper : CSTHG/RC3036

(Computer Network and Internet Technology)

Full Marks : 60
Pass Marks : 24

Time : 3 hours

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

1. Choose the correct answer (any *five*) :   1×5=5

   (a) Which of the following transmission directions is not a legitimate channel?

   (i) Simplex

   (ii) Full duplex

   (iii) Double duplex

   (iv) Half duplex

(Turn Over)

(b) 'Parity bits' are used for which of the following purposes?

(i) Encryption of data

(ii) To transmit faster

(iii) To detect the errors

(iv) To identify the users

(c) What is the number of layers in the OSI model?

(i) 2 layers

(ii) 4 layers

(iii) 7 layers

(iv) 5 layers

(d) Which layer provides service to the user?

(i) Session layer

(ii) Application layer

(iii) Presentation layer

(iv) Data link layer

(e) A computer network is

(i) a device used to display information on a computer screen

(ii) a collection of interconnected computers and devices that can communicate and share resources

(iii) a type of software used to create decuments and presentations

(iv) the physical casing that protects a computer's internal components

(f) Which network topology requires a central controller or hub?

(i) Ring

(ii) Bus

(iii) Star

(iv) Mesh

(g) Which of the following is used to define a variable in JavaScript?

(i) var

(ii) let

(iii) Both (i) and (ii)

(iv) int

(h) Which type of CSS is the following code snippet?

<HI style = "color : blue,"> A blue heading </HI>;

   (i) Internal

   (ii) External

   (iii) Inline

   (iv) Middle line

(i) Which of the following is an internet protocol?

   (i) Modem

   (ii) HTML

   (iii) Transmission Control Protocol (TCP)

   (iv) Hypertext Processor (PHP)

(j) Which of the following is an information space on the internet where documents and other resources are stored?

   (i) World Wide Web (WWW)

   (ii) Protocol

   (iii) Web server

   (iv) File explorer

2. Answer any *five* of the following questions :   2×5=10

(a) What is networking?

(b) Differentiate between internet and extranet.

(c) Write the advantage and disadvantage of twisted pair cable.

(d) What is internet browser?

(e) What do you mean by social networks?

(f) Explain wide area network (WAN).

(g) What do you mean by radio frequency propagation?

3. Answer any *five* of the following questions :   5×5=25

(a) Describe the following network devices :

   (i) Switch

   (ii) Router

(b) Explain the advantages of bus topology.

(c) What are the responsibilities of transport layer in the internet model?

(d) Discuss the differences between webpage and website.

(e) Explain the <!DOCTYPE> element of an HTML page.

(f) What is data communication? What are the main components of data communication?

(g) What are the differences between satellite communication and optical communication?

(h) What are the different data types present in JavaScript?

(i) What are the applications of computer network?

4. Answer any *two* of the following questions :
10×2=20

(a) What is internet? Discuss the working of internet and also discuss the various services offered by internet.   3+7=10

(b) Describe the guided and unguided transmission media with example and implementation of each.

(c) Define fiber-optic communication principle and light propagation through fiber-optic cable.

(d) Discuss client/server network and peer-to-peer network model.

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