

**Class: X**

**Department: Computer  
Science**

## OBJECTIVE Type Questions

[ 1 mark ]

### Multiple Choice Questions

1. Which of the following is a security technology that establishes an encrypted link between a browser and a web server ?

- (a) Usenet                      (b) Telnet  
(c) SSL                            (d) InterNIC

Ans. (c) SSL

**Explanation:** SSL (Secure Sockets Layer) is a protocol for establishing authenticated and encrypted links between networked computers.

2. Data transmission on network takes place according to protocols. Protocols are .....

- (a) An agreement on how communicating devices will communicate.  
(b) Logical communication channels for transferring data.  
(c) Physical communication channels used for transferring data.  
(d) None of the above

3. What is a Firewall in computer network?

- (a) The physical boundary of network.  
(b) An operating system of computer network.  
(c) A system designed to prevent unauthorised access.  
(d) A web browsing software.

4. Rajesh, a history teacher, wants to search some content on 'Vedic Civilization'. Suggest him a popular web browser from the given choices.

- (a) Firefox                      (b) Safari  
(c) Navigator                    (d) All of these

Ans. (d) All of these

**Explanation:** A search engine is an application that allows users to search the internet for content using keywords. Mozilla Firefox, Safari, Google Chrome, Navigator etc. are all popular search engines.

5. Modem is a modulating and demodulating device. Digital information is converted into analog by the modem at .....

- (a) Destination computer  
(b) Source computer  
(c) Both (a) and (b)  
(d) Neither (a) nor (b)

[CBSE 2011]

Ans. (b) Source computer  **Caution**

↳ A modem is a device that converts digital signals into analog (modulation) for transmission over the data communication channels at the source and then converts back the analog signals into digital signals (demodulation) at the destination for the receiving device to understand.

6. On his birthday, Aditya's father gave him a smartphone with internet access. What can he accomplish on the internet?

- (a) Exchange information with friends, teachers and relatives only.  
(b) Exchange information, access pictures, find diverse perspective on issues from a global audience.  
(c) Access only pictures, sounds, video clips and other media elements.  
(d) Find diverse perspective on issues from a global audience.

7. To access a website one needs to enter the URL of the website. URL stands for:

- (a) Uniform Reform Locator  
(b) Universal Resource Locator  
(c) Uniform Resource Locator  
(d) Universal Reform Locator

8. Shania enjoys travelling and posts about her adventures in an online journal where readers can provide comments. Her online journal is referred to as a .....

- (a) News group                    (b) Website  
(c) Blog                              (d) None of these

Ans. (c) Blog

9. The first page on a website that allows you to navigate to other pages via menu system or links is known as:

- (a) First page                      (b) Primary page  
(c) Front page                    (d) Home page

Ans. (d) Home page

**Explanation:** The home page is the main page or the first page of a website.



### Related Theory

↳ A landing page is a web page, created specifically for marketing or advertising campaign. The visitors can reach to this page by clicking on an advertisement link or promotional email etc.

10. ④ The first network was supposed to be the communications system for the defense team of the United States of America. It was called .....
- (a) Internet (b) ARPANET  
(c) NSFNet (d) NET

11. Kirti, a student, has written some points about web pages and URL.

(A) Which of the following statements are true about web pages ?

- (I) You cannot email a link of the web page.  
(II) You cannot create a webpage.  
(III) Web pages are written in HTML.  
(IV) Web pages are viewed on browser.

(B) Which of the following statements are true about URL?

- (I) URL means Uniform Resource Locator.  
(II) You can enter URL into address bar.  
(III) An example of URL is we@fg.com.  
(IV) It is not necessary for URL to be unique.

Which of the following combinations is correct?

- (a) (A) (I) - (II) and (B) (II) - (IV)  
(b) (A) (III) - (IV) and (B) (I) - (II)  
(c) (A) (II) - (III) and (B) (III) - (IV)  
(d) (A) (I) - (IV) and (B) (II) - (III)

[CBSE 2015]

Ans. (b) (A) (III) - (IV) and (B) (I) - (II)

**Explanation:** HTML (Hypertext Markup Language) is a language used to create web pages and these web pages are rendered on a web browser.

A URL (Uniform Resource Locator) is a web address of a website. It provides a way to search a resource on the web.

12. ④ A collection of the pages linked together in a random order is:

- (a) a website (b) a web server  
(c) a search engine (d) a web browser

[CBSE 2014]

13. A website consists of multimedia and hyperlink. Combination of multimedia and hyperlink is called:

- (a) Hypermedia (b) Hypertext  
(c) Email (d) None of these

Ans. (a) Hypermedia

**Explanation:** HyperText is simply a piece of text that links to other text or pages. Hypermedia is any multimedia object that links to other webpages or documents.

14. ④ A web page which is located using uniformly reachable links is called:

- (a) Universal Record Locator  
(b) Uniform Resource Locator  
(c) Universal Record Linking  
(d) Uniform Record Linking

15. An IP address is a string of ..... numbers separated by periods.

- (a) 3 (b) 4  
(c) 2 (d) 5 [CBSE 2011]

Ans. (b) 4

**Explanation:** An IP address is a unique address that identifies a device on the Internet or a local network. It consists of four numbers (12 digits), each of which contains 1 to 3 digits, separated by a single dot (.). Each of the four numbers can range from 0 to 255. For example an IP address might look like 62.105.0.209

16. FTP is used to upload and download files on Internet. The full form of FTP is .....

- (a) File Transmission Protocol  
(b) File Transport Protocol  
(c) Force Transfer Protocol  
(d) File Transfer Protocol

Ans. (d) File Transfer Protocol

**Explanation:** FTP (File Transfer Protocol) is a network protocol that allows the transmission of files between computers over TCP/IP (Transmission Control Protocol/ Internet Protocol).

17. Usenet is used for online discussions through posts about various topics. It is known as:

- (a) Chat (b) E mail  
(c) Newsgroup (d) E discussion

Ans. (c) Newsgroup



### Caution

➤ Chat rooms and forums are both methods to communicate with other people over the Internet. Whereas chat rooms allow communication with people in real time, newsgroups or forums are more suited for discussions where not all participants have to be online at the same time.

**36. Assertion (A): HTTPS is a secured protocol.**  
**Reason (R): The firewall with HTTP ensures the safe transmission of data.**

Ans. (c) Assertion (A) is true but reason (R) is false.

**Explanation:** HTTPS stands for Hyper Text Transfer Protocol Secured. It is enhanced version of HTTP working with SSL (Secure Socket Layer). SSL takes care of ensuring that the data goes securely over the Internet.



### Related Theory

↳ A firewall is a special type of network security mechanism or a software program that prevents unauthorized access and monitors and filters incoming and outgoing network traffic on computer.

**37. Assertion (A): SSH is a network protocol.**  
**Reason (R): SSH gives system administrators a secure way to communicate.**

Ans. (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

**Explanation:** SSH stands for Secure Socket Shell. It provides strong authentication and protects the communication security with strong encryption.

**38. Assertion (A): POP is a call receiving protocol.**

**Reason (R): SMTP allows to make calls over the Internet.**

### Fill in the Blanks

**39. Transactions, SMS service, investments and account information are all ..... services.**

**40. are elements that help you to express your feelings or emotions.**

Ans. Emoticons



### Related Theory

↳ Emotions + icons

**41. A computer program that is used to search a website content and automatically index it is called.....**

Ans. Web crawler

**42. option of an email client displays the deleted mails.**

Ans. Trash

**43. Video conferencing enables consumers to receive counsel in locations where real hospitals and medical professionals are not accessible. The term for this is .....**

Ans. Telemedicine

**44. .... refers to the learning that takes place in an electronically simulated environment.**

**45. makes something available to you 24 hours a day, 7 days a week, 12 months a year.**

Ans. Letter 'e'

**46. .... is the next generation of mobile technologies with enhanced download and upload speeds and better connectivity.**

Ans. 4G

## CASE BASED Questions (CBQs)

[ 4-5 marks ]

**Read the following passages and answer the questions that follow:**

**47. In mid 80's another federal agency, the NSF created a new high capacity network called NSFnet, which was more capable than ARPANET. The only drawback of NSFnet was that it allowed only academic research on its network and not any kind of private business on it. Now, several private organisations and people started working to build their own networks, named private networks, which were later (in 1990's) connected with ARPANET and NSFnet to form the Internet. The Internet really became popular in 1990's after the development of World Wide Web.**

(A) What does NSFnet stands for?

- (a) National Senior Foundation Network
- (b) National Science Framework Network
- (c) National Science Foundation Network
- (d) National Science Formation Network

(B) What does ARPANET stands for?

- (a) Advanced Research Premium Agency NETWORK
- (b) Advanced Research Projects Agency NETWORK
- (c) Advanced Review Projects Agency NETWORK
- (d) Advanced Research Protection Agency NETWORK

- (C)  **What is internet?**  
 (a) **A single network**  
 (b) **A vast collection of different networks**  
 (c) **Interconnection of local area networks**  
 (d) **Interconnection of wide area networks**
- (D) **To join the internet, the computer has to be connected to a .....**  
 (a) **Internet architecture board**  
 (b) **Internet society**  
 (c) **Internet Service Provider**  
 (d) **Different computer**
- (E) **Internet access by transmitting digital data over the wires of a local telephone network is provided by:**  
 (a) **Leased line**  
 (b) **Digital Subscriber Line**  
 (c) **Digital signal line**  
 (d) **Digital leased line**
- (F)  **An icon or image on a web page associated with another webpage is called .....**  
 (a) **URL**                      (b) **Hyperlink**  
 (c) **Plugin**                    (d) **Extension**
- (G) **Which was the first protocol that established a standard way of communication between computers ?**  
 (a) **HTTP**                      (b) **TCP/IP**  
 (c) **HTTPS**                    (d) **FTP**

Ans. (A) (c) National Science Foundation Network



### Related Theory

↳ NSFnet allowed only academic research on its network and not any kind of private business.

- (D) (c) Internet Service Provider  
 (E) (b) Digital Subscriber Line

**Explanation:** DSL is a popular broadband connection which provides Internet access by transmitting digital data over the wires of a local telephone lines. A special modem is necessary in order to be able to use a DSL service over a standard phone line.

- (G) (b) TCP/IP

**48.** TCP/IP, or the Transmission Control Protocol/Internet Protocol, is a suite of communication protocols used to interconnect network devices on the internet. TCP/IP can also be used as a communications protocol in a private computer network (an intranet or an extranet). TCP defines how applications can create channels of communication across a network. It also manages how a message is assembled into smaller packets before they are then transmitted over the internet and reassembled in the right order at the destination address.

IP defines how to address and route each packet to make sure it reaches the right destination. Each gateway computer on the network checks this IP address to determine where to forward the message. TCP/IP uses the client-server model of communication in which a user or machine (a client) is provided a service (like sending a webpage) by another computer (a server) in the network. Collectively, the TCP/IP suite of protocols is classified as stateless, which means each client request is considered new because it is unrelated to previous requests. Being stateless frees up network paths so they can be used continuously.

- (A) **Which of the following protocols is used in the internet?**  
 (a) **HTTP**                      (b) **FTP**  
 (c) **TCP/IP**                    (d) **All of these**
- (B)  **Which one of the following is not a protocol used in internet?**  
 (a) **SMTP**                      (b) **FTP**  
 (c) **VoIP**                      (d) **HTTPS**
- (C) **Which protocol is used to send and receive emails?**  
 (a) **SMTP**                      (b) **POP**  
 (c) **FTP**                        (d) **Both (a) and (b)**
- (D)  **SFTP stands for:**  
 (a) **Simple File Transfer Protocol**  
 (b) **Secure File Transfer Protocol**  
 (c) **Secure File Transmission Protocol**  
 (d) **None of the above**
- (E) **Internet protocols are a set of rules to govern:**  
 (a) **communication between computers on a network**  
 (b) **standard**  
 (c) **metropolitan communication**  
 (d) **bandwidth**
- (F) **It is responsible for addressing and sending the data packets over the Internet so that it reaches the correct destination.**  
 (a) **TCP**                        (b) **FTP**  
 (c) **IP**                          (d) **HTTP**
- (G)  **This protocol is responsible for breaking the data into packets before sending over a network station.**  
 (a) **IP**                          (b) **HTTP**  
 (c) **TCP**                        (d) **FTP**


Ans. (A) (d) All of these

**Explanation:** HTTP (Hyper Text Transfer Protocol) is the set of rules for transferring hypertext on World Wide Web.



# VERY SHORT ANSWER Type Questions (VSA)

[ 1 mark ]

61.  Laluma Chakradhar wants a broadband connection to access her mails and stay informed about the latest happening in the field of Biotechnology.

Can you suggest two Internet Service Providers (ISPs) of India to be approached for the same? [CBSE 2011]

62. Siddhant has keen interest in Astronomy. He wants to get the latest updates in the field of astronomy and also to connect to more people with same interests. What should he do?

Ans. Siddhant can join a newsgroup about astronomy and then post his messages there and read what other people have to tell.

63. Sumedha had been working as an accountant with a business organisation for last 20 years. She had a 8 hrs 6 days a week work schedule.

With the advancement in the information technology she now need not go to the office daily but still is able to do her work as efficiently as earlier. How?

Ans. Sumedha must have subscribed to a broadband connection which would have facilitated her to connect to her organization's database. She can now easily upload and download the requisite data and also attend meetings through video conferencing.

64. For an organisation that has its premises spread in an area of around 2 kms. What type of networking will you suggest? The employees of this organization also need to connect to the outsiders in a controlled manner. Which modern networking technologies can be used to improve overall performance of the organisation and to connect to the outsiders?

Ans. For such an organization a LAN should be a preferred choice. For connecting to the outside world in an organization extranet can be established.



## Related Theory

↳ An extranet is a controlled private network that allows access to partners, vendors and suppliers or an authorized set of customers – normally to a subset of the information accessible from an organization's intranet. It uses internet technology.

65.  Write the web extensions given to a website of the following types of organisation.  
(A) educational (B) government

[CBSE 2008]

66. Internet is closely linked to www. Explain www.

Ans. WWW (World Wide Web) is a collection of digital pages and documents spread all over the world and linked with hyperlinks. This collection is governed by certain set of standards and protocols. To access these pages we need an internet connection.



## Caution

↳ WWW is a collection of documents, linked via special links called hyperlinks. WWW forms a large part of Internet but is not the Internet.

67. Differentiate between FTP and Telnet.

Ans.	FTP	Telnet
	FTP (File Transfer Protocol) is used to transfer files in a network.	Telnet is a connection protocol that allows a user to connect to a remote server.

68. Differentiate between a website and a web portal.

Ans.	FTP	Telnet
	A website is a collection of related web pages.	A web portal is a website which hosts other websites i.e. a website having hyperlinks to many other websites is called a web portal.




## Related Theory

↳ Website delivers one specific type of application or content as per the goal of the website. Web portal is a complete environment for managing and integrating a large number of websites serving diverse information.

69.  Identify domain names and URLs from the following list:

- fashiontrends.com
- www.fashionhub.com/men/summer.html
- www.finearts.org/index.htm
- http://cbse.nic.in

70.  The search engine will show you a URL such as Make My Trip, if you are looking for a booking site to reserve a vacation package for a particular tourist destination. What is the role of URL?

**71. What do you understand by remote login?**

Ans. A remote login or remote access is the ability to get access to a computer or a network from a device that is not part of local network.



**Related Theory**

↳ Some of the protocols used for remote login are FTP, Telnet, SSH, SFTP and SCP.

**72. As a part of her science assignment, Radhika is downloading photographs from the web. What do you mean by the term "downloading"?**

Ans. Downloading is transferring files from a server to a client's computer.



**Related Theory**

↳ A client is a computer that connects to and uses the resources of a remote computer, or server.

**73. Write any one disadvantage of email.**

**74. Briefly discuss the role of a web browser in Internet surfing. [CBSE 2019]**

Ans. A web browser is a program that retrieves information from the web allowing users to locate and display web pages and aids in internet surfing.

**75. Telnet these days is extensively used for system administration of routers, switches and remote servers. What do you understand by Telnet?**

**76. Sushmita's mother is an interior designer. She created an Instagram page where she uploads her mother's designs. This helps her mother get more clients. What do you understand by "uploading," and which protocol is used for it?**

Ans. Uploading refers to the process of transferring a file from a local computer to a web server. The File Transfer Protocol (FTP) is used for uploading files.

**77. DNS is like a phonebook of Internet. What do you understand by DNS?**

Ans. The full form of DNS is Domain Name System. DNS is an IP service that translates the name of a domain into an individual IP address.

**78. Mrs. Sharma has started a business of readymade garments. Suggest her, the advantages of having a web page for her shop.**

**79. Sushmita writes posts for a food blog. What does post exactly mean?**

Ans. The entries or information in the blogs are known as posts.

**80. What information is provided by a news server?**

Ans. A news server provides messages posted in Newsgroups that are organized in a hierarchical structure.



**Related Theory**

↳ First part of a URL specifies the type of server such as ftp, gopher, http, mail or news. Each type of server provides specific type of information in specific form.

**81. What is a 'club' in internet jargon?**

Ans. Online Newsgroups to which an Internet user can subscribe is known as a club.



**Related Theory**

↳ Newsgroup, forums, usenet, clubs, bulletin boards are used synonymously for the service provided by news servers.

**82. Having lately joined a newsgroup, Sushant, a 65-year-old retired man, shares his opinions on numerous issues that catch his interest. The same circle includes several of his friends as well. One day, Sushant was sending some private messages to a friend in the group, when his son advised him to write the friend an email instead. He was unable to distinguish between the two. Explain him the difference between an email and a newsgroup.**

Ans. Unlike E-mail messages, which are visible only to the sender and specified recipients, Newsgroup messages can be read by anyone, who views the group in which they are posted.

## SHORT ANSWER Type-I Questions (SA-I)

[ 2 marks ]

**83. Garvit is a poet and uploads his piece of writings on his blog.**

(A) What type of blog he writes?

(B) How is it different from micro blog?

Ans. (A) He writes a personal blog.

(B) A personal blog is the most common type of blog. It is a type of online diary or journal in which bloggers post stories about their interest and experiences

**102. "A web browser is different from a web server". Explain any two differences between web browser and web server with suitable example of each. [CBSE Term-2 SQP 2022]**

Ans.

Web Browser	Web Server
A web browser is a program that retrieves information from the web allowing users to locate and display web pages and acts as internet surfing	A Web server is a program on a server computer that hosts a large number of web pages and delivers the requested web pages to the clients

The web browser act as an interface between the server and the client.	The web server is a software or a system which maintain the web documents and applications.
The web browser sends an HTTP request and gets an HTTP response to displays a web document to the client e.g., Google chrome, Mozilla firefox.	The web server gets HTTP requests to accept client's data or request and in return, send HTTP responses e.g., Apoche web server, Jigsaw server.

## SHORT ANSWER Type-II Questions (SA-II)

[ 3 marks ]

**103. (A) Expand the following in the context of Internet Protocols:**

- (i) SMTP
- (ii) POP3

**(B) Write the difference between SMTP and POP3. [CBSE Term-2 2022]**

- Ans. (A) (i) SMTP – Simple Mail Transfer Protocol  
(ii) POP3 – Post Office Protocol 3
- (B) Difference between SMTP and POP3 is as follows:

SMTP	POP3
This protocol is used for sending mails.	This protocol is used for receiving mails.
It transfers the mail from sender's computer to the mail box present on receiver's mail server.	It allows to retrieve and organise mails from mailbox on receiver mail server to receiver's computer.

**104. Comfy Shoes is a small shoe manufacturing company. They decided to create a website, that will allow customers to order online.**

- (A) Describe how comfy shoes would benefit from the introduction of a website.**
- (B) Describe how the customers would benefit from the introduction of the website.**
- (C) Give three disadvantages of using the internet to purchase goods.**

- Ans. (A) Through website they can reach directly to many customers from far away places in a cost effective manner. Also, there is no need to incur huge cost of setting up a shop/store to sell items.

- (B) The website will keep customers up-to-date with latest trends and changes. They can find information about new products, services, special deals, and upcoming events.

- (C) Three disadvantages of using the internet to purchase goods are as follows:

- (1) Risk of fraud.
- (2) Risk of poor material.
- (3) Delay in shipment.

**105. The following sentence describes the term Uniform Resource Locator (URL) used on the internet URL is the ..(A).. name corresponding to the ..(B).. address of a computer on the Internet. URL is the ..(C).. of a resource on the Internet. URL is always ..(D).. . Internet users access your ..(E).. using its URL. An example of a URL is ..(F)..**

**Fill in the blanks with words from the list below:**

**Unique, Numeric IP, website, text, personal, www.abc.com, abc.com, server, web address, account**

- Ans. (A) Text  
(B) numeric IP  
(C) web address  
(D) unique  
(E) Website  
(F) www.abc.com

**106. Geetika is searching for a job. Through email, she submitted her resume and application to numerous companies. She doesn't use the conventional mailing method. List the benefits of email over the traditional mail system.**



OR

**Chatting is a way to exchange messages over internet using a software. What are the other advantages of chatting?**

- Ans. Email has many advantages over traditional mailing system. Some of them are as follows:
- (1) An email is very fast. It is received and delivered within seconds from anywhere in the world.
  - (2) Email is very cheap means of communication as compared to other systems.
  - (3) Sending and receiving an email is very easy and convenient. Many types of files such as text files, audio, videos and images can be sent as an attachment through an email.
  - (4) Multiple copies of a message can be sent to a group of people.

*(Write any three)*

OR

The advantages of chatting are as follows:

- (1) Online chatting is a real time communication as if one is talking to other person face to face.
- (2) Multimedia files like audio, video etc. can be sent using instant messaging app.
- (3) People can also chat in a group.
- (4) It is a great tool to stay in contact with friends or family who may live far away or overseas.
- (5) Chatting forums allow to meet new people virtually while in the comforts of one's home.

*(Write any three)*

**107. Aastha has got an assignment to write a brief note on newsgroup. What do you know about newsgroup? Explain.**

Ans. A newsgroup or forum is an online community board, where users can post message, respond to posted messages or just read them. When a user sends a message the news server posts it for everyone to read. Other members of the newsgroup can then respond to the message. These newsgroups are classified according to subjects as follows:

- (1) **rec:** recreation and entertainment topics
- (2) **news:** Matter related to the functionality of Usenet itself
- (3) **sci:** Science related topics
- (4) **soc:** discussion related to society and social subcultures
- (5) **comp:** computer related topics

**108. is news group? Write one advantage and one dis-advantage of the news group .**

**109. Differentiate between a Web Address and an Email Address. Write an example of each to illustrate the difference.**

Ans. Differences between web address and email address are as follows:

Web Address	E-Mail address
Web address is the location of a web page on WWW.	Email address identifies a mail account on mail server.
A web address consists of protocol type, domain name and path of web page on the server.	An email address consists of a user name and domain name.
Example of a web address is <a href="http://www.google.com">www.google.com</a>	Example of an email id is <a href="mailto:francis@gmail.com">francis@gmail.com</a>

**110. What are the types of blogs?**

Ans. There are four types of blogs

- (1) **Personal blog:** personal blogging started off as a way of creating an online diary.
- (2) **News and views:** this type of blog contains actual and factual stories about news maintained by journalists. Visitors can add their own opinions as well.
- (3) **Company blogs:** Many companies run blogs to let their customers and clients know what is going on in the company such as their upcoming or new projects.
- (4) **Microblogs:** In this type of blog one can post very short comments that others can follow and give their comments as well. *Note: Write any three points*

**111. Mention any three important features of WWW.**

Ans. The features of www are as follows:

- (1) It allows to create and display graphics, audio, video and animation in a web page.
- (2) It is dynamic and interactive in nature.
- (3) It provides a single interface to many services.
- (4) It is platform independent. *Note: Write any three points*

**112. What do you understand by a newsgroup? How is it different from a blog?**

[CBSE Term-2 SQP 2022]

Ans. A newsgroup is an online community bulletin board where groups of users with common interests can create, post, comment and reply to the topics of similar interests. Difference between newsgroup and blog is given below.



Newsgroup	Blog
A group or online bulletin board where people can post messages, usually about a specific subject.	A blog is an online journal or informational website where a writer or a group of writers share their personal views on an individual subject.



### Related Theory

↳ In a blog the posts or information is displayed in reverse chronological order i.e. the latest posts appearing at the top.

**113. In a crime thriller a cyber criminal was detected by the IP address of the computer he used to commit the crime. What is meant by IP address? Discuss its functions.**

**Ans.** An IP address is a unique address that identifies a device on the internet or a local network. IP stands for "Internet Protocol. An IP address works as an identifier that aids in information to be sent between devices on a network. The internet needs a way to differentiate between different devices connected to server. IP addresses provide a way of doing so by making devices accessible for communication.

**114. How can you justify the division of different types of networks?**

**Ans.** The networks are divided into four categories. These are:

- (1) LAN (Local Area Network) – Spans over a small area mostly a building or a small office premises.
- (2) MAN (Metropolitan Area Network) – Spans across a city.
- (3) WAN (Wide Area Network) – Spans across two or more cities.
- (4) PAN (Personal Area Network) – Spans across a person's personal space.



### Caution

↳ This categorisation is based on the geographical spread of the networks.

**115. What is the significance of 'S' in HTTPS?**

**Ans.** Hyper Text Transfer Protocol Secure (HTTPS) is the secure version of HTTP, the protocol over which data is sent between your browser and the website that we are connected to. The 'S' at the end of HTTPS stands for 'Secure'. It means all communications between our browser and the website are encrypted.



### Related Theory

↳ HTTPS uses SSL (Secure Sockets Layer) certificate that helps create a secure and encrypted connection between the server and the browser.

## LONG ANSWER Type Questions (LA)

[ 4 & 5 marks ]

**116. Read the following paragraph. Find six network and communication related abbreviations and give their expanded form along with a single-line definition of each of them.**

**The RBI is planning to expand its connectivity with all major banks of India. The plan includes providing TCP connectivity through HTTP for easy access points and seek help from some ISPs to join hands in this venture. Also, there is a plan to set-up IIS and SMTP servers. Some banks will go for ADSL line while others will use leased line connectivity to access these services. The RBI is also taking help of IIT professors in this venture.**

[CBSE 2011]

**Ans.** Six network and communication related abbreviations are as follows:

- (1) TCP (Transmission Control Protocol) A protocol developed for the Internet to get information from one network device to another.
- (2) HTTP (HyperText Transfer Protocol) A protocol that transmits hypertext over networks. This is the protocol of the Web.
- (3) ISP (Internet Service Provider) An organisation that provides access to the Internet through various connectivity methods.
- (4) IIS (Internet Information Server) It is a Microsoft proprietary Web server software.
- (5) SMTP (Simple Mail Transfer Protocol) It distributes E-mail messages and attached files to one or more electronic mail boxes.
- (6) ADSL (Asymmetrical Digital Subscriber Line) A data communication technology that enables faster data transmission over copper telephone lines than a conventional voice band modem can provide.

**117. What is DNS and also explain its functions?**

[CBSE 2013]

**Ans.** DNS stands for Domain Name System. It is a hierarchical distributed naming system for computers, services or any resources connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. The different functions of DNS are as follows:

- (1) It translates meaningful domain names into the numerical IP addresses, which is needed for the purpose of locating computer services and devices world wide.
- (2) It serves as the phone book for the Internet by translating human friendly computer host names into IP addresses.
- (3) The DNS can be quickly updated, allowing a service's location on the network to change without affecting the end users.
- (4) It distributes the responsibility of assigning domain names and mapping those names to IP addresses by designating authoritative name servers for each domain.
- (5) It also specifies the technical functionality of database service. It defines the DNS protocol, a detailed specification of the data structure and data communication exchanges used in DNS, as part of the Internet Protocol Suite (IPS)

**118. What do you understand by the term URL? How is it different from an email address?**

**Explanation:** Difference between URL and email address are as follows:

**Ans.** URL stands for Uniform Resource Locator. It is basically a web address that identifies a resource on the internet. An email address is an account on a mail server. The main difference is that an email address contains an '@' sign whereas a URL never has it. An email address does not start with a www.  
**[CBSE Marking Scheme Term-2 SQP 2022]**

URL	E-Mail address
URL is the location of a web page on WWW.	Email address identifies a mail account on mail server.
A URL consists of protocol type, domain name and path of web page on the server.	An email address consists of a user name and domain name.

A URL stands for Uniform Resource Locator. It is the address or location of a resource on the Internet to access it.



**Related Theory**

↳ A web address or URL looks like : protocol type:// address/path, where as a typical email address looks like : username@domainname

**119. Every morning and evening, Vishal coaches football. He has enough free time for the rest of the day. He intends to use the time productively by blogging. Describe the advantages and disadvantages of blogging.**

**Ans. Advantages:**

- (1) Enables you to write down your thoughts on anything that interests you.
- (2) Easy to set up doesn't need much technical knowledge.
- (3) Easy and quick to update or add new posts.
- (4) People can leave comments on your blog .
- (5) If you want to read other people's blogs there are literally millions to choose from.

**Disadvantages:**

- (1) Whatever you publish is available for everyone to see. You cannot authenticate anyone to see your blog .
- (2) Personal blog may be biased or contain inaccurate information.
- (3) People may leave rude or inappropriate comments.
- (4) Before you find something worth reading, you have to look around many blogs which could be boring.
- (5) Blogging can be time consuming. Finding time to write regular update can become a chore.

**120. Fatima is a school owner and wants an internet connection for the computer lab of her school. Explain her the various ways to connect with the internet.**

**Ans.** There are mainly three ways of connecting to the Internet, which are as follows:

- (1) **Dial-up Connection:** A dial-up connection uses a standard phone line and analog modem to access the Internet. The computer is connected with modem that connects through the standard phone lines. It serves as the data transfer medium. User needs to enter the password and specify a username at the time of initiating the connection. A dialup connection is the least expensive way to access the Internet, but it is also the slowest connection.