

CLASS X – COMPUTER SCIENCE
INTERNET BASICS AND INTERNET SERVICES

Section A: Theoretical Questions

1. **What is Internet?**

Answer: Internet is a computer based world-wide communication network, which is composed of large number of smaller interconnected networks.

2. **What is a server and web server?**

Answer:

Server: A server is a computer or device on a network that manages network resources. A server requests mainly related to resources on the network such as for sharing a resource like printer or sharing storage etc. There are many types of servers such as a file server or mail server or web server etc.

Web Server: Web server are computers that deliver (serves up) web pages. In technical terms we can say that they handle HTTP request. For example, if you enter the URL <http://www.edupillar.com/index.html> in your browser, this sends a request to the web server, whose domain name is edupillar.com. The server then fetches the page named index.html and sends it to your browser.

3. **What are the services provided by a server?**

Answer: The following are the services provided by a server:

- **Equipment/Resource Sharing:** High quality printers and photocopiers are often designed to connect directly to a network and all authorised users can share the equipment. A server is responsible for such a resource sharing request.
- **Centralised File saving for Data Sharing:** Server help the user save files to their home directories on the file server, workers can load their documents on any computer connected to network.
- **Centralised Virus Scanning:** Most file servers run virus scanner constantly to detect and take care of viruses introduced by any user on any computer.
- **Centralised Backups:** High-capacity tape devices in the file server backup all users work, usually every night. In case of system failure (or worker failure), lost work can be recovered quickly and easily.

4. **What are the services provided by a web server?**

Answer: The following are the services provided by a web server:

- **Serving web pages:** The primary function of a web server is to deliver web pages on the request of client using **Hypertext Transfer Protocol (HTTP)**. This means delivery of HTML documents and any additional content may be included by document, such as images, style sheets and script.
- **Running Gateway Programs (CGI) and Returning Output:** In order to process the request received the web servers need to run special programmes, called CGI programs which help them fetch the required output as per the request made by the client.
- **Controlling access to the server:** A full implementation of HTTP also includes ways of receiving content from clients. This feature is used for submitting web forms including uploading of files.
- **Monitoring and Logging all Access:** These web servers also ensure that only authenticated access takes place and thus they keep running many monitoring programs and keep a log of all the activities.
- **Server-Side Scripting:** Many generic web servers also support server-side scripting using *Active Server Pages (ASP)*, *PHP*, or other scripting languages.

5. **Name some common web servers.**

Answer: Some common web server softwares are Apache Webserver, Apache Tomcat, Webserver IIS, The Lighttpd Server, Jigsaw web server, Sun Java system web server, etc.

6. **What is a website?**

Answer: A website or site is a group of related web pages hosted on a web server and are linked together, share a common interface and design.

7. **What are the components of a website?**

Answer: the following are the essential components for making a website:

- **Webhost:** Hosting is where a website is physically located. Group of linked web pages qualify to be called website **only when hosted on a web server**.
- **Address:** This is the address of the website also called URL of the site. this is the address which is to be entered in the address bar of the web browser.
- **Homepage:** it is the first page that appears when we were go to a website. It is important as it sets the look and feel of the website and direct viewers to the rest of the pages on the website.
- **Design:** It is overall look and feel the website has as a result of proper use and integration elements like navigation menu, graphics, layout, etc.
- **Content:** All the web pages contained on the website together make up the contents of the website.

8. **What are the differences between a website and a web portal?**

Answer:

S. No.	Web Portal (or Portal)	Website
1	Collection of launch web pages of array of web services like email, search engine, weather, gaming, news, etc.	Collection of web pages offering a specialised content pertaining to the need and goal of the organization owning the website.
2	It is normally an entry point or gateway for using the offered web services.	It is often the final destination to access and use the provided specific information.
3	Generally, link to many other websites that provide these web services.	A website is generally linked to its own webpages.
4	A complete environment for managing and integrating a large number of diverse applications.	Caters to or delivers one specific type of application or content as per the goal of the website.
5	E.g.: Google, Yahoo, Rediff, MSN, etc.	E.g.: cbseacademics.in, marutisuzuki.com, ncert.nic.in, etc.

9. What are the differences between a webpage and a website?

OR

What is a website? How is it related to a web page and home page?

Answer: A website is composed of group of web pages linked together. A website refers to a central location on a web server that contains more than one web pages. A website may have just the home page, or it may have many other internal web pages in addition to the homepage.

For example, marutisuzuki.com is considered a website which contains many web pages. However, a single web page on this site would be its *Home Page* or *About Us* page.

10. Explain the terms?

- Web page
- Home page

Answer:

- **Web page:** A document using HTTP and that resides on a website is known as a web page.
- **Home page:** It is the top-level web page of a website. This is the page that is displayed first when a website is opened.

11. What is a web browser? Name some web browsers?

Answer: A web browser is a program that lets you visit different sites on the Net and display their offerings on your own computer. Some of the web browser available in the market are Google Chrome, Microsoft Edge, Safari, Opera, Netscape, Mozilla Firefox.

12. Differentiate between a web browser and web server.

Answer: A WWW client is called a **web browser** and a WWW server is called a **web server**.

A web browser navigates through the worldwide web and displays web pages. The web browser requests a page from a web server. The web server makes available the desired page to web browser.

13. What is a URL? Discuss the format of the URL?

Answer: A location on a net server is called a web site. Each website has a unique address called URL (uniform resource locator) example, the website of Microsoft has an address or URL called <http://www.microsoft.com>.

Format of URL: URLs look like this:

type://address/path

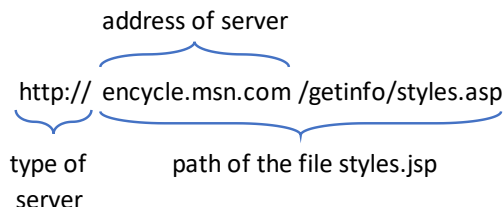
where,

type: specifies the type of server in which the file is located.

address: is the address of the server.

path: specifies the location of file on the server.

For example, in the following URL

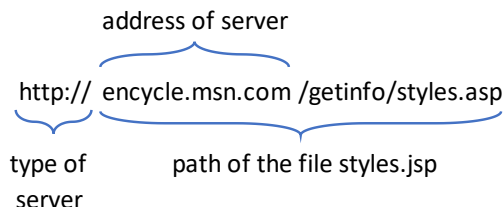


14. What are the components of URL?

Answer: The following are the components of the URL or Uniform Resource Locator:

- The type of server or protocol
- The name/address of the server on the Internet
- The location of the file on the server (this location maybe related as a "path" through the file hierarchy)

For example, in the following URL



15. What roles do various protocols play on Internet?

Answer:

Server	Protocol	Information it provides
ftp	File Transfer Protocol	Text and binary files that are organised in a hierarchical structure much like a family tree.
gopher	Transfer Control Protocol/Internet Protocol (TCP/IP)	Text and binary files that are organised in a menu structure.
http	Hypertext Transfer Protocol	Hypertext/hypermedia files (i.e., multimedia documents that contains links to images, sounds, or other multimedia documents on the World Wide Web).

mail	Post Office Protocol (POP) Version 3 and Simple Mail Transfer Protocol (SMTP)	Messages sent via electronic mail. POP3 – Receiving incoming files. SMTP – Sending & distributing outgoing Emails.
news	Network News Transfer Protocol	Newsgroup that are organised in a hierarchical structure.
voip	Voice over Internet Protocol	Making calls on Internet.

16. List some most common domain name.

Answer: Some Most Common Domains

S. No.	Domain ID	Affiliation	Remarks (Used by)
1	.com	Commercial	Commercial firms
2	.edu	Education	Educational firms
3	.gov	Government	Governmental bodies
4	.mil	Military	Military
5	.net	Network Resources	ISPs / networks
6	.org	Organization (usually non-profit)	NGOs, etc.
7	.co	Company	Listed companies
8	.co.in	Company India	Listed companies (India)
9	.tv	Television	TV Channels & companies

17. What are the differences between HTTP and HTTPS?

Answer: The following are differences between HTTP & HTTPS:

HTTP	HTTPS
It is a system for transferring information over Internet without any security feature.	It is a system of transferring information with SSL (Secure Socket Layer) that encrypts and sends information over a secure connection making it hard to steal.
It is useful for sending non-sensitive information.	It is used for transferring/exchanging sensitive information.
It is generally used for blogs, entertainment information and journal articles, etc.	It is used for exchanging information such as login details, bank details, payment detail, etc.
It does not require any additional technology for data transfer/exchange.	It requires additional SSL certificate for secure exchange of data/information through secure connection.

18. What is the significance of HTTP?

Answer: Protocol is a system of rules that defines how something is to be done. In computer terminology, it is usually agreed upon or standardised method for transmitting data and/or establishing communications between different devices.

HTTP: HTTP or the hypertext transfer protocol is an access method (method to access webpage) is used on Internet. It is the primary access method for interacting with Internet. The HTTP is responsible for accessing hypertext document on world wide web. Since worldwide web is a system governing the use of multimedia files on the net and the hypertext files support multimedia, the HTTP generally works in combination of www.

19. What is an email? Explain its advantages and limitations in brief.

Answer: Email or electronic mail is the most widely used tool to send message electronically (i.e., through computers) on a network.

The following are the advantages of an E-mail:

- Low cost
- Speed
- Waste reduction
- Ease of use
- Record Maintenance

The following are the limitations of an email:

- Hardware Requirement
- Hard to convey emotions

20. Explain structure of an Email Address?

OR

What are two parts of an Email Address? Which character is used to separate the two parts of an email address?

Answer: The following is the structure of an Email Address:

username@hostname

An email address contains two parts, username and hostname separated by '@' (known as 'at' or 'at the rate of') where,

username: on the left side of @ separator is email account holder's net name.

hostname: on the right side of @ separator is the server or host or network that services email. It is called as e-mail server.

For example: bala_gm@hotmail.com where bala_gm is username and hotmail.com is server.

21. How can one have an e-mail account for sending and receiving email?

Answer: One can have the e-mail account created in two ways. One can have either web based online e-mail account from any of the e-mail Service Provider's such as Gmail, Yahoo mail, Hotmail, etc. or an e-mail account from the ISP's (Internet Service Provider) server, the one who provide Internet Services at home, office, etc. The latter is less prevalent nowadays. The former is now being widely used.

In case of ISP, email address is created by ISP and the account owner can use the same.

In case of Service Provider,

- User can visit Service Provider's website online and create their own account using 'Create New Account' or 'Sign Up' option. The user needs to provide basic information such as name, age, gender, address, city, country, etc. to create new email account.

Answer: **Downloading** refers to the process of transferring files from a net server onto one's local machine.

Uploading refers to the process of transferring from one's local machine onto a net server. It is the opposite process of downloading.

40. Give the Full Form of?

- www
 - FTP
- Answer:
- www – world wide web
 - FTP – File Transfer Protocol

41. Identify web addresses and e-mail addresses from the following:

- a. www.kool.com b. Raga100@rediffmail.com c. www.hotspider.co.in d. 123hotshot@elixir.co.in

Answer: **a** and **c** are web addresses. **b** and **d** are e-mail addresses.

42. Mention any two uses of Internet.

The following are the two uses of Internet:

- a. Sending and receiving e-mails instantly.
- b. Sharing information online

43. Distinguish between the web address and e-mail address.

Answer: The following are the differences between web address and e-mail address:

- Every Internet web page has a web address which is known as the URL while an e-mail address is the address of a person's digital mailbox. It is used for the transmission of messages and files through a pc network.
- A web address consists of a protocol, domain name, and occasionally the path to a specific web page or location on a web page whereas consists of a username and a domain name. A domain name represents the service provider while a username represents the unique user identity.
- The web address usually has 'http' or 'www' in their address whereas e-mail addresses have '@' sign which separates username and server name.
- Example of web address is <https://google.com> and example of email address is abc_xyz@gmail.com.

Section B: Multiple Choice Questions

1. A website is a collection of
 - a. HTML Documents
 - b. Graphic files
 - c. Audio & video files
 - d. All the above
2. The page that you normally view at a website is its
 - a. Home Page
 - b. Master Page
 - c. First Page
 - d. Banner Page
3. When you visit a website, it will open the page set as _____ of the website
 - a. Web Site
 - b. Home Page
 - c. Email
 - d. ISP
4. The first page on a website that allows you to navigate to other pages via menu system or links, is known as
 - a. front Page
 - b. primary page
 - c. home page
 - d. first page
5. Which protocol is used on most URL addresses?
 - a. HTML
 - b. HTP
 - c. HTTP
 - d. HLINK
6. Which is not the part of URL?
 - a. IP address
 - b. Port Number
 - c. Domain Name
 - d. None of these
7. Which portion of URL (<http://www.somestore.com/firstfloor/shoes.htm>) records the directory or folder of the desired resource?
 - a. http
 - b. firstfloor
 - c. shoes.htm
 - d. www.somestore.com
8. In the URL, <http://www.pacein.com/pr/main.htm>, which component identifies the protocol or the type of server?
 - a. http
 - b. www.pacein.com
 - c. /pr/main.htm
 - d. none
9. In the URL, <http://www.pacein.com/pr/main.htm>, which component identifies the website?
 - a. http
 - b. www.pacein.com
 - c. /pr/main.htm
 - d. none
10. In the URL, <http://www.pacein.com/pr/main.htm>, which component identifies the path of a webpage?
 - a. http
 - b. www.pacein.com
 - c. ...com/pr/main.htm
 - d. none
11. An email can be sent via,
 - a. PC
 - b. Tablet
 - c. Smart Phone
 - d. All the above
12. In an email address, the characters following '@' represent:
 - a. Username
 - b. E-mail Recipient
 - c. Domain name
 - d. None of these
13. In the email address "hithere@edupillar.com" what is the domain name
 - a. The whole email address
 - b. .com
 - c. edupillar.com
 - d. hithere
14. _____ field of email-compose box allows to send same message to multiple recipients without getting them know about other recipients
 - a. cc
 - b. To
 - c. bcc
 - d. Message
15. Which of the following is not a legal domain in context of web address?
 - a. edu
 - b. com
 - c. tv
 - d. work
16. Chatting on Internet is
 - a. Talking face to face
 - b. Talking on phone
 - c. Online textual talk
 - d. None of these
17. A _____ room or online forum allows users to communicate through typed messages which are displayed almost instantly.
 - a. Mail
 - b. Buddy
 - c. Chat
 - d. Messages
18. Online textual talk is called
 - a. Video conferencing
 - b. Telephony
 - c. Text Phone
 - d. Chat
19. Electronic mail cannot be used for
 - a. Sending documents
 - b. Sending bulk data (say over 2GB)
 - c. Sending attachments
 - d. Sending messages
20. A two-way video phone conversation among multiple participants is called:
 - a. Video chatting
 - b. Video talking
 - c. Video conferencing
 - d. Video watching
21. Which of the following is not a feature / service of the web?
 - a. E-mail
 - b. Telnet
 - c. CPU
 - d. Chat
22. Pick the odd one out
 - a. Amazon
 - b. e-bay
 - c. Twitter
 - d. naaptol
23. The benefits of e-learning:
 - a. Class work can be scheduled around work and family

- b. Reduce travel time and cost for off-campus student.
 - c. Students can study anywhere they have access to a computer and Internet connection.
 - d. All the above
24. Which one of the following is the most used features of Internet:
- a. e-mail
 - b. FTP
 - c. Telnet
 - d. Usenet
25. e-Reservation is a process of making reservation of
- a. Tickets
 - b. Hotel rooms
 - c. Tourist packages
 - d. All of these
26. Buying goods by placing order online is called
- a. e-commerce
 - b. e-shopping
 - c. e-buying
 - d. All of these
27. Which of the following is the major reason cited for e-shopping's popularity
- a. Unique offers
 - b. Price
 - c. Impulse
 - d. Convenience
28. Which of the following is/are immensely popular services of Internet?
- a. e-commerce
 - b. blogs
 - c. Social networking
 - d. e-shopping
29. Which of the following is/are example(s) e-governance:
- a. Applying for passport online
 - b. Sending e-mail to your school friend
 - c. Enquiring about the status of Aadhaar application
 - d. Both a and c

Section C: Fill in the blanks

1. The Internet is most often used for the purpose of exchange of _____ and _____.
2. Web pages on a site are linked together through a system of _____.
3. The _____ are the documents that use HTTP.
4. The address of location of the document on the world wide web is called _____.
5. A _____ is a set of rules that are needed for communication.
6. _____ enables the actual sending and receiving of messages.
7. The symbol, '@' is pronounced as _____.

ANSWERS

Section B: Multiple Choice Questions

- 1) d 2) a 3) b 4) c 5) c 6) a 7) b 8) a 9) b 10) c
 11) d 12) c 13) c 14) c 15) d 16) c 17) c 18) d 19) b 20) c
 21) c 22) c 23) d 24) a 25) d 26) b 27) d 28) c 29) d

Section C: Fill in the blanks

- 1) messages, information
- 2) hyperlinks
- 3) webpages
- 4) Uniform resource locator (URL)
- 5) protocol
- 6) SMTP
- 7) 'at' or 'at the rate'