

# BITT POLYTECHNIC

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Question set with answers

Subject-Fundamental of Computer

Branch-All

Semester-1<sup>st</sup>

A. Objective types questions :

- a. ROM stands for \_\_\_\_\_
- b. \_\_\_\_\_ is an extension of MS Word.
- c. Ctrl + S is shortcut key to paste. (T/F)
- d. OMR stands for \_\_\_\_\_
- e. One byte = \_\_\_\_\_ bits.
- f. A workbook is a multi-page excel document.(T/F)
- g. LCD stands for \_\_\_\_\_.
- h. A set of rules is called \_\_\_\_\_.
- i. FTP stands for \_\_\_\_\_
- j. Machine language is a \_\_\_\_\_ level language.

ANS:

a.) ROM- Read only memory; b).doc ; (c) false ; (d) OMR- optical mark recognition; (e) 1 byte= 8 bits ; (f) true (g) LCD- Liquid Crystal display; (h) A set of rules is called protocols. (i) FTP- File Transfer Protocol (j) low level language.

**B. Short answers type questions:**

**1. Explain difference between compiler and interpreter**

**ANS: Basic differences between Compiler and Interpreter:**

- Compiler translates the high level instruction into machine language, but the interpreter translates the high level instruction into an intermediate code.
- The compiler executes the entire program at a time, but the interpreter executes each and every line individually.
- Compiler reports the list of errors that are caused during the process of execution, but the interpreter quits translating soon after finding an error, the progression of the other lines ...

**2. Define software and its type.**

**ANS:** Software is a set of instructions, data or programs used to operate computers and execute specific tasks. Opposite of hardware, which describes the physical aspects of a computer, software is a generic term used to refer to applications, scripts and programs that run on a device. Software can be thought of as the variable part...

There are two main types of software: system software and application software. Systems Software. Systems software includes the programs that are dedicated to managing the computer itself, such as the operating system, file management utilities, and disk operating system (or DOS).

**3. Define alignment of text in MS-Word.**

**ANS:** Microsoft Word comes equipped with a tool that allows users to align text both vertically and horizontally, giving you complete freedom for determining the position of text in a Word document.

#### **Aligning Text horizontally in Word**

Horizontal alignment, also known as centered alignment, positions the text evenly between the margins on either side of the page. This tool also allows you to be selective with the text you align horizontally, giving you more control over what you can do to your document.

#### **Aligning Text Vertically in Word**

As you've probably guessed, vertical alignment positions the text evenly between the upper and lower margins of the page. You won't notice a difference in the text alignment if you use it on a page that's already full of text.

#### **4.. What are the uses of MS-Word and MS-Excel?**

**ANS:** Uses of MS WORD are:

##### **(i)Business and workplace use of Microsoft Word: –**

You can create all types of official documents in Microsoft Word. You can use template function in Microsoft to download letterhead samples, bills, and cash memos, joining letters, receipts, letterhead and all various types of accounts management related work. You can send an email by using a mail merge that helps you to send one document to thousands of people with name and address.

##### **(ii) MS word uses in Education: –**

Microsoft word is the best teaching tool for teachers. You can create a lecture script by using text, word art, shapes, colors, and images. That will explore creativity in students. They will watch a slide or printed document more interestingly. Other than that you can type and edit question paper in Microsoft Word. You can write an application, a letter that is helpful in a certain situation. Microsoft Word is used to create various educational materials. It's helpful to create error-free documents.

##### **(iii). Home-based users of Microsoft Word: –**

You can create a birthday card, invitation card in Microsoft Word by using pre-defined templates or using insert menu and format menus functions. You can also type a letter to the municipal party on MS-Word.

#### **5. What is WWW and Web Browser?**

**Ans:-** WWW-The World Wide Web, commonly known as the Web, is an information system where documents and other web resources are identified by Uniform Resource Locators, which may be interlinked by hypertext, and are accessible over the Internet.

**Web browser-**A web browser is a software program that allows a user to locate, access, and display web pages. ... Browsers are used primarily for displaying and accessing websites on the internet, as well as other content created using languages such as Hypertext Markup Language (HTML) and Extensible Markup Language (XML).

#### **6. What is SRAM and DRAM?**

**Ans:-** Static random-access memory is a type of semiconductor random-access memory that uses bistable latching circuitry to store each bit. SRAM exhibits data remanence, but it is still volatile in the conventional sense that data is eventually lost when the memory is not powered.

Dynamic random-access memory is a type of random access semiconductor memory that stores each bit of data in a memory cell consisting of a tiny capacitor and a transistor, both typically based on metal-oxide-semiconductor technology

### **7. What is Cyber security?**

**Ans:-** Cyber security refers to the body of technologies, processes, and practices designed to protect networks, devices, programs, and data from attack, damage, or unauthorized access. Cyber security may also be referred to as information technology security.

### **8. Define IOT and IOE?**

**Ans:-**IOT(Internet of things)-The Internet of things (IoT) is a system of interrelated computing devices, mechanical and digital machines provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. IOE(Internet of everything)-The internet of everything (IoE) is a broad term that refers to devices and consumer products connected to the internet and outfitted with expanded digital features. It is a philosophy in which technology's future is comprised of many different types of appliances, devices and items connected to the global internet.

### **9. What Is The Difference Between Save And Save As?**

**Answer :**Use SAVE when you are revising an existing document.

Use SAVE AS when you are creating a new document from scratch or an existing document. This will keep the original document untouched in its original format and create a new document with a new name.

### **10. What Is Floppy Disk?**

**Answer :** A round, flexible piece of magnetic media stored within a 3.5 inch square protective plastic case. One floppy disk can store 1.44 megabytes of data. Because floppy disks use magnetic media, they must be kept away from magnets, or the data on them could be erased! Computer speakers are magnetically shielded to prevent erasure of floppy disks, but standard speakers are not!

## **C .long answers type questions:**

### **1.What is cloud computing? How many types of Cloud computing?**

**Ans:-** Cloud technology enables the reusability of IT resources for storing large databases, developing and hosting complex applications, and expanding computational power and other services on demand. Eliminating or reducing investments on large-scale infrastructure and software, coupled with the pay-per-use model, significantly reduces IT costs. Some traditional computing techniques that have helped enterprises achieve additional computing and storage capabilities, while meeting customer demands using shared physical resources, are:

- Cluster computing connects different computers in a single location via LAN to work as a single computer. Improves the combined performance of the organization which owns it
- Grid computing enables collaboration between enterprises to carry out distributed computing jobs using interconnected computers spread across multiple locations running independently

- Utility computing provides web services such as computing, storage space, and applications to users at a low cost through the virtualization of several backend servers. Utility computing has laid the foundation for today's cloud computing

- Distributed computing landscape connects ubiquitous networks and connected devices enabling peer-to-peer computing. Examples of such cloud infrastructure are ATMs, and intranets/ workgroups Types of cloud computing services The most common and widely adopted cloud computing services are Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS).

- Infrastructure as a Service (IaaS): IaaS is a cloud computing model where virtualized infrastructure is offered to, and managed for, businesses by external cloud providers. With IaaS, companies can outsource for storages, servers, data center space and cloud networking components connected through the internet, offering similar functionality as that of an on-premises infrastructure. Some examples of the wide usage of IaaS are automated, policy-driven operations such as backup, recovery, monitoring, clustering, internal networking, website hosting, etc. The service provider is responsible for building the servers and storage, networking firewalls/ security, and the physical data center. Some key players offering IaaS are Amazon EC2, Microsoft Azure, Google Cloud Platform, GoGrid, Rackspace, DigitalOcean among others.

- Platform as a Service (PaaS): PaaS builds on IaaS. Here, cloud vendors deliver computing resources, both cloud software and hardware infrastructure components like middleware and operating systems, required to develop and test applications. The PaaS environment enables cloud users (accessing them via a webpage) to install and host data sets, development tools and business analytics applications, apart from building and maintaining necessary hardware. Some key players offering PaaS are Bluemix, CloudBees, Salesforce.com, Google App Engine, Heroku, AWS, Microsoft Azure, OpenShift, Oracle Cloud, SAP and OpenShift.

- Software as a Service (SaaS): SaaS is special in that it incorporates both IaaS and Paas. Here, the cloud service provider delivers the entire software suite as a pay-per-use model. SaaS lets users easily access software applications -- such as emails -- over the internet. Most common examples of SaaS are Microsoft Office 360, AppDynamics, Adobe Creative Cloud, Google G Suite, Zoho, Salesforce, Marketo, Oracle CRM, Pardot Marketing Automation, and SAP Business ByDesign.

- Types of cloud deployments There are three types of cloud deployments categorized based on an organization's ability to manage and secure assets as well as business needs.

- Public cloud: Public cloud, in general, is SaaS services offered to users over the internet. It is the most economical option for users in which the service provider bears the expenses of bandwidth and infrastructure. It has limited configurations, and the cost is determined by usage capacity. That said, the limitations of the public cloud are its lack of SLA specifications. Despite high reliability, lower costs, zero maintenance and on-demand scalability, the public cloud is not suitable for organizations operating with sensitive information as they have to comply with stringent security regulations.

- Private cloud: As the name suggests, the private cloud is used by large organizations to build and manage their own data centers for specific business and IT needs/ operations. The private cloud provides more control over customizability, scalability and flexibility, while improving security of assets and business operations. This sort of infrastructure can be built on premises or outsourced to a third party service provider – either way, it has the ability to maintain the hardware and software environment over a

private network solely for the owner. Large- and medium-scale financial enterprises and government agencies typically opt for private clouds.

- **Hybrid cloud:** Hybrid cloud is the combination of a private and public cloud, providing for more flexibility to businesses while having control over critical operations and assets, coupled with improved flexibility and cost efficiency. The hybrid cloud architecture enables companies to take advantage of the public cloud as and when necessary due to their easy workload migration. For instance, businesses can use the public cloud for running high-volume applications like emails, and utilize private clouds for sensitive assets like financials, data recovery, and during scheduled maintenance and rise in demand

## 2. What is Computer Network and explain its types?

Ans:- Computer Network is a system of interconnected computers that enable the computers to communicate with each other and share their resources, data and applications. The physical location of each computer is tailored to personal and organizational needs. A network may include only personal computers or a mix of PCs, minis and mainframes spanning a particular geographical area. Computer network types :-

- (i). Local Area Networks (LANs)
- (ii). Wide Area Networks(WANs)
- (iii). Metropolitan Area Networks (MANs)
- (iv) Personal Area Network (PAN)

i) **Local Area Network (LAN)** :LAN is a group of computers (as shown in Fig.1), that are connected in a small area such as building, home, etc. Through this type of network, users can easily communicate with each other by sending and receiving messages. LAN is generally used for connecting two or more personal computers through some medium such as twisted pair, coaxial cable etc. Through the number of computers connected in a LAN is limited, the data is transferred at an extremely faster rate.

ii) **Wide Area Network (WAN)** :WAN is a group of computers that are connected in a large area such as continent, country, etc. WAN is generally used for connecting two or more LANs through some medium such as leased telephone lines, microwaves, etc. In WAN, data is transferred at slow rate.

iii) **Metropolitan Area Network (MAN)** :MAN is a network of computers that covers a large area like city. The size of the MAN generally lies between LAN and WAN, typically covering a distance of 5 km to 50 km. The geographical area covered by MAN is comparatively larger than LAN but smaller than WAN. MAN is generally owned by private organizations. MAN is generally connected with the help of optical fibers, copper wires etc. One of the most common examples of MAN is cable television network within a city as shown in Fig.3. A network device known as router is used to connect the LANs together. The router directs the information packets to the desired destination.

iv) **Personal Area Network (PAN):**

PAN is the interconnection of information technology devices within the range of an individual person, typically within a range of 10 meters. For Example: a person traveling with a laptop, a personal digital assistant (PDA), and a portable printer could interconnect them without having to plug anything in, using some form of wireless technology such as WiFi.

Typically, this kind of personal area network could also be interconnected without wires to the Internet or other networks. You can use PAN networks to transfer files including email and calendar appointments, digital photos and music etc from your portable devices such as phones and tablets to PC and vice versa.

### **3. What is Computer and explain its types ?**

**Ans:-** Computer is an electronic device that is designed to work with Information. The term computer is derived from the Latin term 'computare', this means to calculate or programmable machine. Computer cannot do anything without a Program. It represents the decimal numbers through a string of binary digits. The Word 'Computer' usually refers to the Center Processor Unit plus Internal memory.

On the basis of working of principles, the computer is of three types:

- o Analogue Computer
- o Digital Computer
- o Hybrid Computer

**i) Analogue Computer** :Analogue computers are designed to process the analogue data. Analogue data is continuous data that changes continuously and cannot have discrete values such as speed, temperature, pressure and current. The analogue computers measure the continuous changes in physical quantity and generally render output as a reading on a dial or scale. Analogue computers directly accept the data from the measuring device without first converting it into numbers and codes. Speedometer and mercury thermometer are examples of analogue computers.

**ii) Digital Computer** :Digital computer is designed to perform calculations and logical operations at high speed. It accepts the raw data as digits or numbers and processes it with programs stored in its memory to produce output. All modern computers like laptops and desktops that we use at home or office are digital computers.

**iii) Hybrid Computer:** Hybrid computer has features of both analogue and digital computer. It is fast like analogue computer and has memory and accuracy like digital computers. It can process both continuous and discrete data. So it is widely used in specialized applications where both analogue and digital data is processed. For example, a processor is used in petrol pumps that converts the measurements of fuel flow into quantity and price.

On the basis of size and capacity, the computer can be of four types:

**1) Supercomputers:** Supercomputers are the biggest and fastest computers. They are designed to process huge amount of data. A supercomputer can process trillions of instructions in a second. It has thousands of interconnected processors. Supercomputers are particularly used in scientific and engineering applications such as weather forecasting, scientific simulations and nuclear energy research. First supercomputer was developed by Roger Cray in 1976.

2) **Mainframe computer:** Mainframe computers are designed to support hundreds or thousands of users simultaneously. They can support multiple programs at the same time. It means they can execute different processes simultaneously. These features of mainframe computers make them ideal for big organizations like banking and telecom sectors, which need to manage and process high volume of data.

3) **Mini computer:** It is a midsize multiprocessing computer. It consists of two or more processors and can support 4 to 200 users at one time. Mini computers are used in institutes and departments for the tasks such as billing, accounting and inventory management.

4) **Microcomputer :**Microcomputer is also known as personal computer. It is a general purpose computer that is designed for individual use. It has a microprocessor as a central processing unit, memory, storage area, input unit and output unit. Laptops and desktop computers are examples of microcomputers.

#### 4. .**Explain Memory of computer?**

**Ans:-** The memory of the computer is divided into two categories: 1.Primary Memory 2.Secondary Memory Primary Memory This is the main memory of the computer. CPU can directly read or write on this memory. It is fixed on the motherboard of the computer. Primary memory is further divided in two types:

- 1.RAM(Random Access Memory)
- 2.ROM(Read Only Memory)

**Random Access Memory:-** RAM is a temporary memory. The information stored in this memory is lost as the power supply to the computer is turned off.That's why it is also called Volatile Memory. It stores the data and instruction given by the user and also the results produced by the computer temporarily.

**ROM(Read only Memory)** Information stored in ROM is permanent in nature,i.e., it holds the data even if the system is switched off. It holds the starting instructions for the computer. ROM cannot be overwritten by the computer. It is also called Non-Volatile Memory Secondary Memory This memory is permanent in nature. It is used to store the different programs and the information permanently (which were temporarily stored in RAM). It holds the information till we erase it.

**Different types of secondary storage devices are:** Hard Disc, Compact Disc, DVD, Pen Drive, Flash Drive, etc. Hard Disc This is the main storage device of the computer which is fixed inside the CPU box. Its storage capacity is very high that varies from 200 GB to 3 TB. As it is fixed inside the CPU box, it is not easy to move the hard disc from one computer to another.

A hard disc contains a number of metallic discs which are called platters. Information is recorded on the surface of the platters in a series of concentric circles.These circles are called Tracks. For the purpose of addressing information, the surface is considered to be divided into

segments called Sectors. This division helps in the proper organisation of data on the platter and helps in maximum utilisation of the storage space.

**Compact Disc(CD)** It is a thin plastic disc coated with metal. Computer can read and write data stored on it. This is an optical storage device with a storage capacity of up to 700 MB and it can store varieties of data like pictures, sounds, movies, texts, etc.

**CD-ROM** **CD-ROM** refers to Compact Disc-Read Only Memory. Data or information is recorded at the time of manufacturing and it can only be read. A CD-ROM cannot be used to record fresh data by the computer. **CD-R** **CD-R** is the short form of Compact Disc-Recordable. Data can be written on it once and can be read whenever required. The data written once cannot be erased.

**CD-RW** **CD-RW** : stands for Compact Disc Re-writable. CD-RW can be used to write information over and over again, i.e., previous information can be erased and new information can be written on it using a CD writer fixed inside the CPU box.

**CDs** are slow in comparison to hard discs to read or write the information on them. They are portable storage devices.

**DVD** stands for Digital Versatile Disc. It is an optical storage device which reads data faster than a CD. A single layer, single sided DVD can store data up to 4.7 GB, i.e., around 6 times than that of CD and a double layer DVD can store data up to 17.08 GB, i.e., around 25 times that of CD. Though DVDs look just like CDs, they can hold much more data, for example, a full length movie.

**Flash Drive:** It is an electronic memory device popularly known as pen drive in which data can be stored permanently and erased when not needed. It is a portable storage device that can be easily connected and removed from the CPU to store data in it. Its capacity can vary from 2 GB to 256 GB. **Blu-ray Disc** This is a newly invented optical data storage device whose storage capacity can be from 25 GB up to 200 GB. It is mainly used to store high quality sound and movie data. They are the scratch resistant discs, that's why, storing data on these is much safer than a CD OR DVD. So, these are some of the common devices we use to store information and data in the computer.

**Memory Units** Data in the computer's memory is represented by the two digits 0 and 1. These two digits are called Binary Digits or Bits. A bit is the smallest unit of computer's memory. To represent each character in memory, a set of 8 binary digits is used. This set of 8 bit is called a Byte. So, one Byte is used to represent one character of data.  $\text{Bits}=0,1$   $1 \text{ Byte}= 8 \text{ bits}$

(e.g, 11001011) To represent a large amount of data in memory, higher data storage units are used like KB(Kilobyte), MB(megabyte), GB(Gigabyte), TB(terabyte), etc. But all these units are formed with the set of bytes like,

1 KB(kilobyte) =  $2^{10}$  Bytes = 1024 Bytes

1 MB(megabyte) =  $2^{10}$  KB = 1024 KB =  $1024 * 1024$  Bytes = 1048576 Bytes  
1 GB(Gigabyte) =  $2^{10}$  MB = 1024 MB

1 TB(Terabyte) =  $2^{10}$  GB = 1024 GB



## 5. Define HTML tag and Explain 5 tag of HTML?

**Ans:-** HTML tags are the hidden keywords within a web page that define how your web browser must format and display the content. Most tags must have two parts, an opening and a closing part. For example, is the opening tag and is the closing tag. Note that the closing tag has the same text as the opening tag, but has an additional forward-slash ( / ) character. I tend to interpret this as the "end" or "close" character. There are some tags that are an exception to this rule, and where a closing tag is not required. The

**Error! Filename not specified.** tag for showing images is one example of this. Each HTML file must have the essential tags for it to be valid, so that web browsers can understand it and display it correctly. The rest of the HTML file can contain as little or as many tags as you want to display your content.

- **HTML Paragraph Tag** Defines a paragraph into web document. HTML paragraph define using <p> tag.

```
<body>
<P> this is the first paragraph</p>
<p> hello welcome to my home</P>
</body>
```

- **HTML Comment Tag.**

Defines the Comments <!--your comments--> tag

```
<body>
<!-- Image file>
</body>
```

- **HTML Images:** Tag To display images into web document. HTML Images are define inside the <img > tag.

```
<body>

</body>
```

- **HTML Link Tag** :Defines the Link in internal or External document. HTML Link are defined inside the <a>tag.

```
<body>
<a href=" http://www.way2tutorial.com"> web development tutorials</a>
</body>
```

- **HTML Headings Tags** Defines the Heading <h1> to <h6>

```
<body>
<h1> heading h1</h1>
<h2> heading h2</h2>
<h3> heading h3</h3>
<h4> heading h4</h4>
<h5> heading h5</h5>
<h6> heading h6</h6>
</body>
```