Chapter-2
Software Concepts

Q.1. What are various categories of software ?
Ans. They are broadly classified into two categories
(i) **System Software :** This type of software controls internal computer operations. The system software can be further classified in two categories
a) **Operating System :** An Operating system is a set of programs which act as a interface between a user and hardware
b) **Language Processors :** This program is responsible for converting a HLL code into machine understandable code.
(ii) **Application Software :**An Application software is a set of programs

Q.2. What are various types of Operating System?
Ans. The Operating system are mainly following types:
(i) **Single Program OS** : As the name suggest this OS is single user operating system, so only one user program can be supported and executed by it
(ii) **Multiprogram OS**: Unlike single program OS, this is multiuser OS. It supports multiprogramming i.e., more than one user can be supported by it, therefore more than one user programs are loaded and active in main memory at a time
(iii) **Time sharing OS**: This OS uses time sharing techniques. Each active use is given a fair share of CPUY time. If the time elapses or an I/O operation is requested, CPU shifts over to the next job waiting and the previous program is put to wait
(iv) **Real time OS**: In this OS the jobs have fixed deadlines and the jobs have to be completed within fixed deadlines. The System performance is measured by its ability to complete its jobs within the specified deadlines.
(v) **Multiprocessing OS** : This OS is capable of handling more than one processors as the jobs have to be executed on more than one processor.

Q.3. What is fragmentation? How does it affect computers performance?
Ans. Fragmentation means files stored in fragmented storage blocks. That is when files are not stored in contiguous storage areas rather their contents are scattered over the disk it is

known as fragmentation. High fragmentation slows down a computer as the computer has to perform more read/ write operations.

Q.4. What is application software ? Why are its types?

Ans. Application Software: An application software is the set of programs necessary to carry out operations for a specified application. These are the programs written by programmers to enable computer to perform a specific tasks such as processing word, inventory controls, handling calculation and figures, medical accounting, financial accounting, result preparation, railway reservation, billing etc.

Application Software Types:

Packages: General application software's are known as Packages.

Utilities: They are those applications programs that assist the computer by performing housekeeping functions like baking up disk or scanning / cleaning viruses or arranging information etc.

Customized Software: This type of software is tailor-made software to a user's requirements. The type of software is developed to meet all the requirements specified by the user.

Q.5. Define the following.

a. Spam b. Malware c. Phishing d. Firewall e. Digital Signature f. Digital Certificate

Ans. Spam : Email spam, also known as junk email or unsolicited bulk email (UBE), is a subset of electronic spam involving nearly identical messages sent to numerous recipients by email. Clicking on links in spam email may send users to phishing web sites or sites that are hosting malware. Spam email may also include malware as scripts or other executable file attachments. Definitions of spam usually include the aspects that email is unsolicited and sent in bulk.

Malware : Malware, short for malicious software, is software used or created to disrupt computer operation, gather sensitive information, or gain access to private computer systems. It can appear in the form of code, scripts, active content, and other software

Phishing : Phishing is attempting to acquire information (and sometimes, indirectly, money) such as usernames, passwords, and credit card details by masquerading as a trustworthy entity in an electronic communication

Firewall : A firewall can either be software-based or hardware-based and is used to help keep a network secure. Its primary objective is to control the incoming and outgoing network traffic by analyzing the data packets and determining whether it should be allowed through or not, based on a predetermined rule set.

Digital Signature : A digital signature or digital signature scheme is a mathematical scheme for demonstrating the authenticity of a digital message or document. A valid digital signature gives a recipient reason to believe that the message was created by a known sender, and that it was not altered in transit. Digital signatures are commonly used for software distribution, financial transactions, and in other cases where it is important to detect forgery or tampering.

Digital Certificate : A digital certificate is an electronic "credit card" that establishes your credentials when doing business or other transactions on the Web. It is issued by a certification authority (CA). It contains your name, a serial number, expiration dates, a copy of the certificate holder's public key (used for encrypting messages and digital signatures), and the digital signature of the certificate-issuing authority so that a recipient can verify that the certificate is real

Q.6. What do you understand by IDE ?
Ans. IDE stands for Integrated Development Environment. It is an application program consisting of different development tools needed for developing and application

Q.7. What is DBMS ? How it is useful
Ans. DBMS stands for Data Base Management System. It is a software that can handle and manage bulk of stored data in the form of tables and records.

Q.8. What is DTP Software ? Give an example of DSTP Software.
Ans. DTP stands for Desk Top Publishing. It is a software that handles page layouts by combining the functions of traditional typesetter and a layout artist. Example is Corel Draw, Page Maker etc.