**Course:** Computer applications/Skills/ITC/CAB **Program:** BS

**Semester:** 4th **Major Assignment**

**Total Marks:** 50 **Instructor:** Zakir Rahim

Due Date: 25th Sep,2020

**Instructions:**

* Students are required to solve the provided assignment and upload it on SIC in due time.
* The solutions can be type-written or hand-written.
* In case of handwritten solutions, you are required to copy pictures of the solved assignment in Ms-Word and upload it.
* The solutions must be uploaded either in Ms-Word format or pdf format.
* Students are required to save the file with their name and student id. For example ahmad\_12345.

Q1. (a) Differentiate between open source software and applications software?

Ans : Open source software (OSS) refers to the software which uses the code freely available on the Internet. The code can be copied, modified or deleted by other users and organizations.. Closed source software (CSS) is opposite to OSS and means the software which uses the proprietary and closely guarded code.

(b) Write different features of system software?

Ans : An important feature of System Software are:

System Software is closer to the system.

Generally written in a low-level language.

The system software is difficult to design and understand.

Fast in speed.

Less interactive.

Smaller in size.

Hard to manipulate.

Q2. (a) Discuss different functions of operating system?

Ans : An Operating System acts as a communication bridge (interface) between the user and computer hardware. The purpose of an operating system is to provide a platform on which a user can execute programs in a convenient and efficient manner.

An operating system is a piece of software that manages the allocation of computer hardware. The coordination of the hardware must be appropriate to ensure the correct working of the computer system and to prevent user programs from interfering with the proper working of the system.

Example: Just like a boss gives order to his employee, in the similar way we request or pass our orders to the Operating System. The main goal of the Operating System is to thus make the computer environment more convenient to use and the secondary goal is to use the resources in the most efficient manner.

(b) Explain the use of File Transfer Protocol and TelNet services ?

Ans : TELNET (TELecommunication NETwork) and FTP (File Transfer Protocol) both are the application layer protocol. They are connection oriented protocols as they create a connection between remote host and a server. AS name File Transfer Protocol, FTP is used for transferring the files from one system to another system.

Q3. (a) Explain Metropolitan Area Network (MAN) with a suitable example?

Ans : A metropolitan area network (MAN) is a network that interconnects users with computer resources in a geographic area or region larger than that covered by even a large local area network (LAN) but smaller than the area covered by a wide area network (WAN).. A recent trend is the installation of wireless MANs.

(b) Define topology? Which topology would you chose to setup a local area network and why?

Ans : Define topology :

1: The study of geometrical properties and spatial relations unaffected by the continuous change of shape or size of figures.

2:The way in which constituent parts are interrelated or arranged.

: Which topology would you chose to setup a local area network and why :

Mainly there are four types of topology, you can consider anyone according to your . In every local area network (LAN), there are vital designated nodes that are . Some redundancy, less cumbersome, easier set up.

Q4. In your opinion, what are the different types of common media used for storage, access and transmission of information? Explain each type in detail?

Ans : There are various types of storage media, including magnetic tape, nonvolatile memory cards, rotating fixed disk and solid-state drives (SSDs), which are based on nonvolatile flash memory. The term storage encompasses all data, and can be either primary or secondary storage.