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BACHELOR OF BUSINESS ADMINISTRATION (B.B.A.)
EXAMINATION : DECEMBER - 2022
SEMESTER - I
Sub. : Basics of Computer & Information Technology (BBA15- 115)

Date : 23/12/2022   **Total Marks : 60**   **Time: 10.00am to 12.30pm**

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q. 1.   Choose the most appropriate option.   (05)

1. Membrane switch is a part of _____.
   a) Mouse   b) Keyboard
   c) Printer   d) Monitor
2. The primary goal of a _____ is to transfer and exchange data.
   a) computer   b) printer
   c) network   d) hard disk
3. _____converts the analog position of a finger on a contact surface into a set of horizontal (X) and vertical (Y) coordinate data.
   a) Mouse   b) Keyboard
   c) Printer   d) Digitizer
4. A _____system allows communication in both directions simultaneously.
   a) simplex   b) half duplex
   c) full duplex   d) parallel
5. _____ is also called a VDU.
   a) Mike   b) Keyboard
   c) Printer   d) Monitor

Q. 2.   State True / False   (05)

1. Bar codes are generated using line of variable thickness.
   a) True   b) False
2. The plotter is a device which is used to take hard copy of graphics and pictures in a paper.
   a) True   b) False
3. ROM is a volatile memory and allows the alteration of data stored in it.
   a) True   b) False
4. In LAN, the letter' L' stands for "Long".
   a) True   b) False
5. Flash memory is a type of EEPROM chip.
   a) True   b) False

Q. 3.   Write Short notes on (Any Three)   (15)

1. Basic building blocks of a computer.
2. Number System.
3. Application software.
4. Serial and parallel communication.
5. MAN.

Q. 4.   **Answer in detail (Any Two)**   **(20)**

1. Classification of computers.

2. Explain Input devices.

3. What are the functions of operating system.

Q. 5.   **Case study (Any One)**   **(15)**

1. The working of an operating system changes with the modifications and advancements in its features brought out with every succeeding version. In the early stages, users had to schedule their tasks manually. But the time slice which used to be idle during this scheduling was considerably large. To overcome this idle time of the CPU, several methods of task scheduling were proposed. Since automatic transition of tasks had become necessary as well as desirable, the operating systems were generally divided into three distinct types. Batch Processing: It is a methodology which reduces the idle time of the CPU by submitting the entire batch of tasks for execution. To begin with, the first task in the batch is executed. After this task is over, the control is automatically switched to the second task and so on till the last task in the batch is executed. After executing the last task, the execution of the current batch is terminated. The system then begins with the next batch of tasks which is fed manually to the system. The limitation of batch processing system is that the next task has to wait till the current task is being executed. Multiprocessing**:** In batch processing, only one task can be executed at a time. While that task waits for a request, the CPU and other resources of the computer remain idle till the execution of the task is resumed. This limitation is overcome in multiprocessing system. At one point of time, more than one tasks can be executed. All the programs are present in the memory simultaneously. The control is switched between these programs and therefore the idle time of CPU is eliminated. As per the waiting time of the program, another program which is ready for execution is taken for processing. This feature greatly enhances the efficiency of the CPU, negating the idle time and offering higher speed. Timesharing: In this method, all the tasks are given a particular time slice for their execution. All the tasks are submitted for execution in a cyclical manner. If the time slice of the task is over before it could finish its execution, after the last task time slice is over, the cycle continues with the first task once again till execution of all tasks is completed. The salient features of this system are appropriate selection of time slice and a timing mechanism which interrupts the CPU for suspending the current task.

     i)) Which methodology which reduces the idle time of the CPU? Explain it in detail.
     ii) Explain multiprocessing in detail.
     iii) In which method, all the tasks are given a particular time slice for their execution? Explain in detail.

2. Connection-Oriented service means that when devices communicate, they perform handshaking to set up an end-to-end connection. The handshaking process may be as simple as synchronization such as in the transport layer protocol TCP, or as complex as negotiating communications parameters as with a modem. Connection-Oriented systems can only work in bi-directional communications environments. To negotiate a connection, both sides must be able to communicate with each other. This will not work

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in a unidirectional environment. Connection-oriented protocols operate in three phases. The first phase is the connection setup phase, during which the corresponding entities establish the connection and negotiate the parameters defining the connection. The second phase is the data transfer phase, during which the corresponding entities exchange messages under the auspices of the connection. Finally, the connection release phase is when the correspondents "tear down" the connection because it is no longer needed. Connectionless service means that no effort is made to set up a dedicated end-to-end connection. Connectionless communication is usually achieved by transmitting information in one direction, from source to destination without checking to see if the destination is still there, or if it is prepared to receive the information. When there is little interference, and plenty of speed available, these systems work fine. In environments where there is difficulty transmitting to the destination, information may have to be re-transmitted several times before the complete message is received. Walkie-talkies or Citizens Band radios are a good examples of connectionless communication. You speak into the mike, and the radio transmitter sends out your

signal. If the person receiving you doesn't understand you, there's nothing his radio can do to correct things, the receiver must send you a message back to repeat your last message. IP, UDP, ICMP DNS, TFTP and SNMP are examples of connectionless protocols in use on the Internet. Connectionless protocols differ markedly from connection-oriented protocols in that they do not provide the capability for error, sequence and flow control. Nor do they have any connection state maintenance requirement. Each message is considered to be independent of all others in a connectionless protocol. Whether or not a given message is received correctly and when has no bearing on other messages; somehow the destination must sort things out and make sense of it all. Connectionless protocols are always in the data transfer phase, with no explicit setup or release phases as in connection-oriented protocols.

- **i)** What do you mean by connectionless communication?
- **ii)** List the connection oriented and connectionless protocols.
- **iii)** What is connection oriented protocol?

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