



June 2018

**COMPUTER HARDWARE & NETWORKING***Time Allowed: 3 Hours**Full Marks: 70***Answer to Question No.1 is compulsory and to be answered first.****This answer is to be made in separate loose script(s) provided for the purpose. Maximum time allowed is 45 minutes, after which the loose answer scripts will be collected and fresh answer scripts for answering the remaining part of the question will be provided.****On early submission of answer scripts of Question No.1, a student will get the remaining script earlier.****Answer any five questions from Group-A & B, taking at least two from each group.**

1. Choose the correct answer from the given alternatives (any twenty): 1x20

i) Which of the following is an input device? – (a) Printer (b) Monitor (c) Scanner (d) Plotter.

**Ans: (c) Scanner**

ii) Commonly system timer use \_\_\_\_\_ IRQ (0 / 1 / 2 / 9).

**Ans: 0**

In a computer, an interrupt request (or IRQ) is a hardware signal sent to the processor that temporarily stops a running program and allows a special program, an interrupt handler, to run instead. Hardware interrupts are used to handle events such as receiving data from a modem or network card, key presses, or mouse movements.

IRQ Number	Typical Use	Description
<b>IRQ 0</b>	System timer	This interrupt is reserved for the internal system timer. It is never available to peripherals or other devices.
IRQ 1	Keyboard	This interrupt is reserved for the keyboard controller. Even on devices without a keyboard, this interrupt is exclusively for keyboard input.

iii) The processor's \_\_\_\_\_ controls the timing of all the computer operations – (a) system clock (b) register (c) machine cycle (d) arithmetic logic unit (ALU)

**Ans: (a) system clock**

It is small chip that synchronizes and controls the timing of all computer operations.

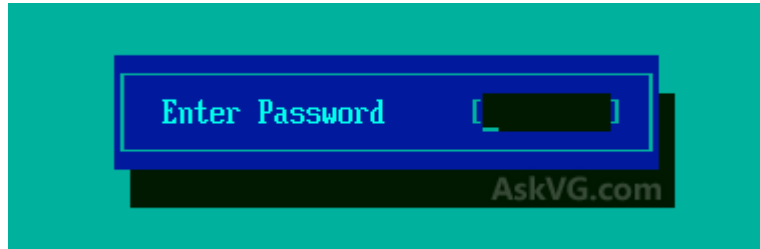
iv) What is BIOS an acronym for? – (a) bootstrap initial operating system (b) basic input output startup (c) boot initial operating startup (d) basic input output system.

**Ans: (d) basic input output system.**

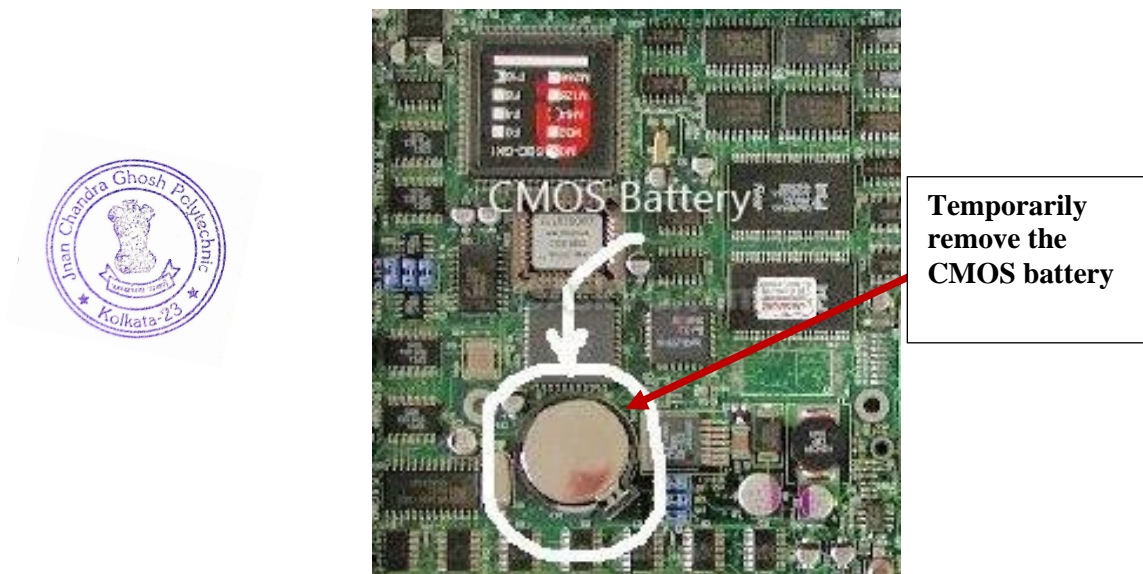
- v) Someone placed a BIOS password on a computer and forgot the password. What should you do? –(a) Boot to a floppy and format the drive (b) Temporarily remove the CMOS battery. (c) Go into BIOS setup and delete the password. (d) Boot down the computer while holding down the <CTRL> key.

Ans: (b) Temporarily remove the CMOS battery.

**BIOS passwords** are used to add some extra security to computers. Purpose of setting a password is to prevent access from BIOS settings or to prevent PC from booting.



But sometimes this extra security might become a pain when we forget the BIOS password or someone changes our system BIOS password intentionally.



Almost all motherboards use a small coin sized CMOS battery to store all BIOS settings along with the password. To reset the password, unplug the PC, open the cabinet and remove the CMOS battery for approx. **15-30** minutes and then put it back. It'll reset all BIOS settings as well as the password and we will have to re-enter all settings.

- vi) A ZIF socket was put on the motherboard to help with inserting and removing? – (a) CPUs (b) SIMMS (c) DIMMS (d) CPU FANS.

Ans: (a) CPUs

**ZIF** full form is **zero insertion force socket**, the ZIF socket was designed by Intel and included a small lever to insert and remove the computer processor.



vii) Which is not a valid AMD CPU? – (a) K6 (b) K8 (c) K5 (d) Athlon.

Ans: (b) K8

K5, K6, Athlon, Duron, and Sempron are different AMD CPU.

viii) Which of the following storage devices allows access to information in a sequential mode? – (a) CD-R (b) DVD (c) Hard disk (d) Magnetic tape.

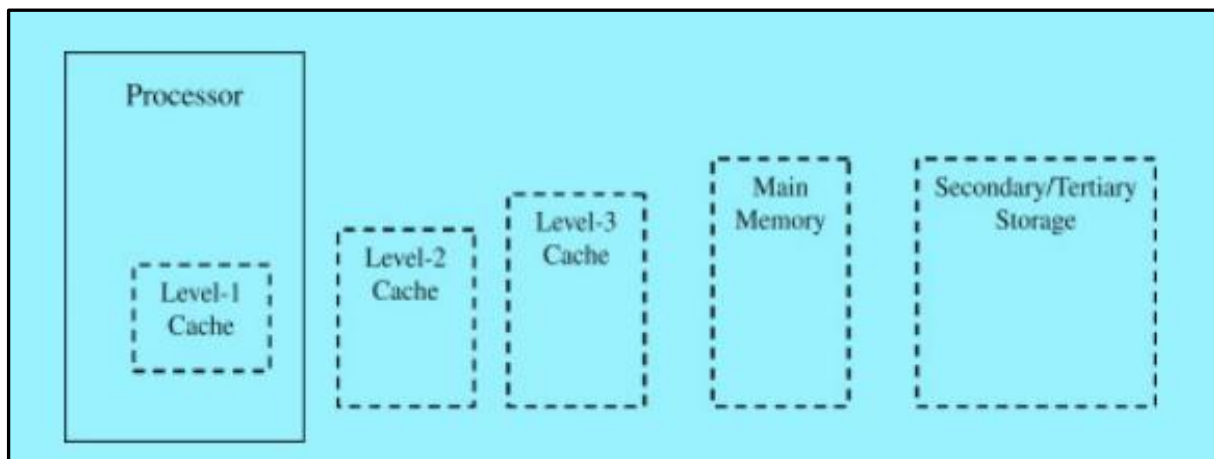
Ans: (d) Magnetic tape.

ix) Which of the following retains the information it's storing when the power to the system is turned off? – (a) CPU (b) ROM (c) DRAM (d) DIMM.

Ans: (b) ROM

x) Which of the following statements is true? – (a) L2 cache is faster than L1 cache (b) There are several levels of cache in a computer (c) The Internet can also be used as a cache memory (d) A cache hit indicates that the information we are looking for is not in the cache.

Ans: (b) There are several levels of cache in a computer



❖ Keep in mind: Level-1 is internal cache, Level-2 and Level-3 are external cache

xi) A COM port is a \_\_\_\_\_ port – (a) parallel (b) serial (c) SCSI (d) SATA.

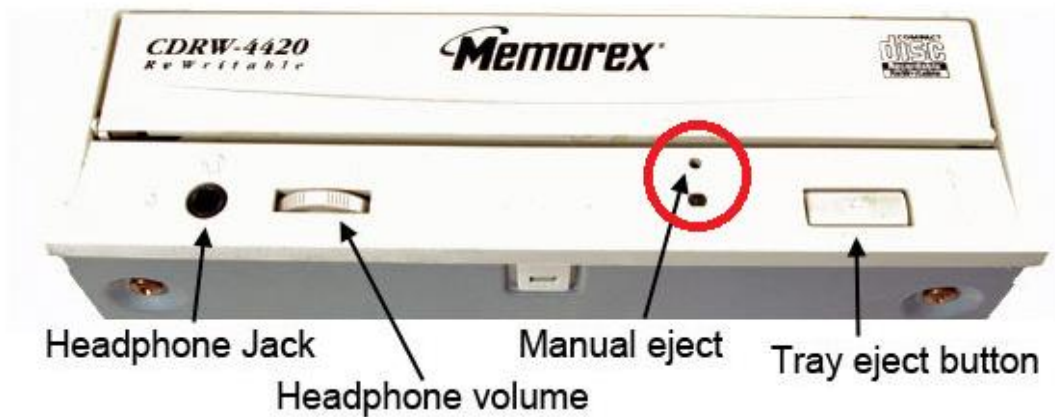
Ans: (b) serial

**Related Concept:** COMMunication port is a serial port. Example of Parallel port is DB-25 connector.

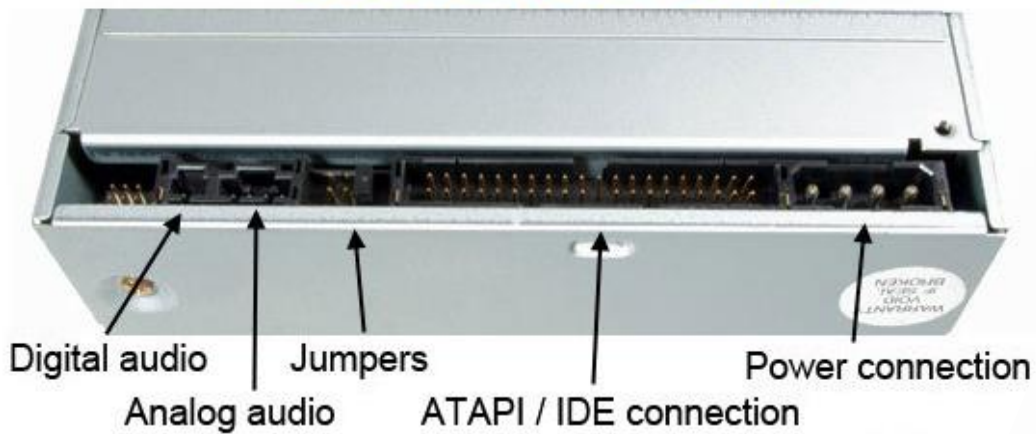
xii) How should you open the tray on an inoperative CD-ROM drive? – (a) Push the eject button (b) Push in on the lower-right corner door (c) Right-click the CD icon and select Eject (d) Insert a paper clip into the CD drive eject hole.

Ans: (d) Insert a paper clip into the CD drive eject hole.

## Front of Disc Drive



## Back of Disc Drive



xiii) Which one is not an output device? – (a) Printer (b) Monitor (c) Keyboard (d) Modem.

Ans: (c) Keyboard

xiv) Which of the following device is used for internet connection? – (a) Switch (b) Hub (c) Modem (d) None of these.

Ans: (c) Modem

Note: **Switch** and **Hub** are used for LAN connection

xv) In a dot matrix printer what strikes the print ribbon to form an image? – (a) Head's Pins (b) Trip Hammers (c) Character Wheel (d) Electromagnets.

Ans: (a) Head's Pins



- xvi) In a Laser printer what is the most common cause of a wavy image on the paper? – (a) Damaged fuser (b) Smooth pickup rollers (c) Defective LASER scanner (d) Defective toner cartridge.

Ans: (d) Defective toner cartridge.

- xvii) OSI stands for – (a) open system interconnection (b) operating system interface (c) optical service implementation (d) none of the mentioned.

Ans: (a) open system interconnection

**Note: Open Systems Interconnection model (OSI model)** is a conceptual model that characterises and standardises the communication functions of a telecommunication or computing system without regard to its underlying internal structure and technology. Its goal is the interoperability of diverse communication systems with standard communication protocols. The model partitions a communication system into some abstraction layers.

- xviii) The physical layer concerns with – (a) bit-by-bit delivery (b) process to process delivery (c) application to application delivery (d) none of the mentioned.

Ans: (a) bit-by-bit delivery

Explanation: Physical layer deals with bit to bit delivery in networking. The data unit in the physical layer is bits. Process to process delivery or the port to port delivery is dealt in the transport layer.

- xix) The 4 byte IP address consists of – (a) network address (b) host address (c) both (a) and (b) (d) none of the mentioned.

Ans: (c) both (a) and (b)

- xx) What is the minimum cable type 100BaseTX specifies? – (a) Category 3 (b) Category 4 (c) Category 5 (d) Category 6.

Ans: (c) Category 5

Note: 100BASE-TX and 1000BASE-T were both designed to require a minimum of **category 5 cable** and also specify a maximum cable length of 100 meters.

- xxi) Which one of the following is the multiple access protocol for channel access control? – (a) CSMA/CD (b) CSMA/CA (c) both (a) and (b) (d) none of the mentioned.

Ans: (c) both (a) and (b)

- xxii) In asymmetric key cryptography, the private key is kept by – (a) sender (b) receiver (c) sender and receiver (d) all the connected devices to the network.

Ans: (b) receiver

