

## Ans to the question - 01

Today's world computer is important to use to start an online and offline business.

There are many useful applications which are important to run a business. Through this application we can automate the manufacturing, marketing and distribution process. Computers help in recharge, production, distribution, marketing, banking, team management and very helpful to increase productivity at a lower cost, less time with high quality.

Computer also plays an important role in education.

Now we used number of applications to improve our quality and learning style. We use Microsoft

Power Point to prepare and deliver electronic

presentations to the audiences. Therefore, we

have many applications such as Google Classroom,

hangouts meets, zoom by which we attend to

online classes through the internet. And there

are many programming applications by which we

practice many method to increase our skills.

So we say that computer plays an important

role in business and education.

Ans to the question - 02

Abacus: An abacus is a mechanical device

used to assist a person in performing mathematical calculations and counting. Before computers, calculators or even arithmetic using paper and pencil, the abacus was the most advanced device for crunching numbers.

Altair 8800: The Altair 8800 is a microcomputer designed in 1974 by MITS and based on the Intel 8080 CPU. The Altair 8800 had a huge impact on people and computers. The Altair 8800 gave ideas to make better and advance computers. Before the Altair 8800 was created, people had to use books to find information or words they did not know. Students even

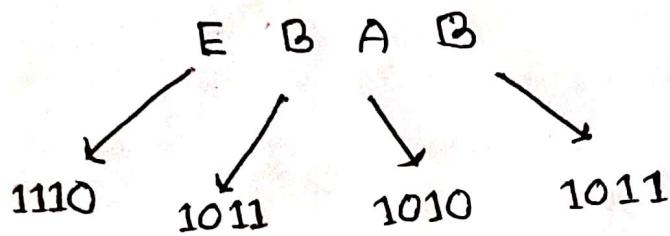
had to use typewriters in order to type up their information or work. After the invention of Altair 8800 all students and people are easily find information and students can easily type their work on it.

Macintosh: The Macintosh is a family of personal computers designed and manufactured by Apple since January 1984. Macintosh is the

first successful mass-market personal computer to have a graphical user interface, built-in screen and mouse. By this people can do many important things like save information, calculations, and many more things.

Ans to the question-03

a)  $(EBA\bar{B})_{16} = (?)_8$



$$\begin{array}{r} (00111010111010101011)_2 \\ \hline 1 \quad 6 \quad 5 \quad 6 \quad 5 \quad 3 \end{array}$$

$\therefore (165653)_8$

$$\therefore (EBA\bar{B})_{16} = (165653)_8$$

b)  $(12.345)_{10} = (?)_2$

$$\begin{array}{r} 2 \mid 12 \\ \hline 2 \quad 6 - 0 \\ \hline 2 \quad 3 - 0 \\ \hline 2 \quad 1 - 1 \\ \hline 0 - 1 \end{array}$$

$$\therefore (12)_{10} = (1100)_2$$

$$0.345 \times 2 = 0.69$$

$$0.69 \times 2 = 1.38$$

0  
1

$$(0.345)_{10} = (0.01)_2$$

$$\therefore (12.345)_{10} = (1100.01)_2$$

Ans to the question-04 (Ques 11) (d)

a)  $(1001)_2 \times (1011)_2$

$$\begin{array}{r} 1001 \\ 1011 \\ \hline 1001 \\ 1001x \\ 0000x \\ 1001x \\ \hline 1100011 \end{array}$$

Ans: 1100011.

b)  $(11000)_2 \div (101)_2$

$$\begin{array}{r} 101 ) 11000 \\ \underline{101} \\ 100 \end{array}$$

└ Remainder

Ans: 100. Remainder = 100

Ans to the question - 05

Ergonomics is the process of designing and arranging things people use so that the people and things interact most efficiently and safely.

It seems nearly everyone in this digital world is spending a lot of time in front of a computer, which can strain the eyes as well as other parts of the body. who uses a computer for prolonged periods - whether on the job at school or at home for enjoyment, there are many risks. Example:

1. Headaches.
2. Burning eyes.
3. Red eyes
4. A stiff neck
5. Computer vision syndrome.

To avoid all these problems we must be careful and we can prevent this by adjusting the brightness, use a efficient and supportive instrument at the desk, taking regular walk breaks and using a good chair that is ergonomical and support the neck.

Repetitive Strain Injury (RSI): Repetitive Strain Injury is a potentially debilitating condition resulting from overusing the hands to perform a repetitive task such as typing.

clicking a mouse or writing. To avoid (RSI)

I suggest <sup>some</sup> rules for a computer users.

1. Take Breaks.

2. use good posture.

3. use an ergonomically optimized workstation to reduce strain on your body.

4. Exercise regularly.
5. Only use the computer as much as you have to.
6. Don't stretch for the hard-to-reach keys.

Example: Backspace, Enter, Shift, Control

By doing this these things I think a computer users can avoid Repetitive Strain Injury (RSI).

Ans to the question - 06

a) Endocentric Environment: In the field of user interfaces, an endocentric environment refers to a virtual reality or some other immersive environment which is introduced directly into the user's senses. Example: VR goggles.

Exocentric Environment: In the field of user interfaces, an exocentric environment refers to a virtual reality or some other immersive environment which completely encompasses the user.

Example: By placing the viewer in a room made up entirely of rear projection screens,

b) Pull Technology: Specifically requesting

information from a particular source. Downloading web pages via a web browser is an example of pull technology. Getting mail is also pull technology if the user initiates a request to retrieve it. Example: Searching on Browsers.

Push Technology: Push technology is a service

in which the user downloads software from a provider which then continually supplies information from the internet in categories selected by the user. Example: E-mail.

c) software as service (SaaS) is a software distribution model in which a third-party provider hosts applications and makes them available to customers over the internet.

Example: Google Apps, Dropbox.

d) Virtual Reality (VR) is the use of computer technology to create a simulated environment unlike traditional user interfaces, VR places the user inside an experience. Instead of viewing a screen in front of them, users are immersed and able to interact with 3D world.

Example: Samsung Gear VR.