

1. What is the difference between data and information?

Data

(i) Data is Collection of raw facts and figures.

ii Data is not So meaningful.

iii. Data is used as input in the Computer.

iv. Raw data alone is insufficient for decision making.

v. Data is an Independent entity.

vi Data is a low-level Knowledge.

vii Example:
Student's test marks.

Information

(i) Information is processed data.

ii. Information is meaningful.

iii. Information is used as output of Computer.

iv. Information is Sufficient for decision making.

v. Information depend on data.

vi Information is the Second level of Knowledge.

vii Example:
The average marks of a class is the information derived from the given data.

2. Briefly explain the process of transfer of information via radio waves through air.

When a person speaks in microphone, microphone Converts Sound into electrical Signals i.e Current. These electrical Signals are given to transmitting antenna. The charges in the antenna oscillate (move to/fo) due to electric Signals. Due to which they produce

electromagnetic radiowaves.

These weak e.m. radiowaves are mixed i.e. modulated with strong e.m. waves, so that it could cover large distance.

When these e.m. radio waves strike receiving antenna, they produce electrical signals which are amplified. Then it is demodulated i.e. information signal is separated and fed to recap for circuit. Finally, it is given to speaker to reproduce sound.

3. What is the difference between primary and secondary memory? Why do we need both in computers?

We need both primary and secondary memory in a computer because sometimes we need to access some data quickly (must be stored on primary memory) and some data for occasionally (must be stored on secondary memory).

Primary Memory

Secondary Memory

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|---|---|
| (i) Primary memory is also known as Main memory or Internal memory. | (i) Secondary memory is also known as External memory or Auxiliary memory. |
| (ii) It is a temporary memory. | (ii) It is a permanent memory. |
| (iii) It is directly accessible by CPU. | (iii) It is not directly accessible by CPU. It requires primary memory for its operation. |
| (iv) It has fast access time. | (iv) It has slow access time. |
| (v) It is more expensive. | (v) It is less expensive. |
| (vi) Volatile in nature except ROM. | (vi) Non-volatile in nature. |

Examples:

RAM, ROM, PROM, EPROM

Examples:

DVD, Hard Disk, Floppy Disk

4. What is difference between RAM and ROM of Computers?

RAM

(i) RAM stands for Random access memory.

(ii) RAM data is volatile.

(iii) Data Can be modified.

(iv) It is a high-speed memory.

(v) It is expensive.

(vi) RAM chip can store multiple gigabytes (GB) of data.

ROM

(i) ROM stands for Read only memory.

(ii) ROM data is Non-volatile. (Permanent)

(iii) Data can't be modified. (Data can only be Read)

(iv) It is much slower than RAM.

(v) It is cheaper.

(vi) ROM chip can store only a few megabytes (MB) of data.

5. Why optical fiber is better than electric wire for Communication process?

Optical fiber is better than electric wire because of the following reasons:

(i) Fiber optic transmission is faster: fiber optics can carry data at close to the speed of light.

(ii) Fiber optic transmission can cover greater distances.

(iii) Fiber optics are lighter: optical fiber is much lighter than any electrical cable.

iv) Fiber optics can transmit signal without any loss.

6. Why is the storage capacity of hard disk greater than a floppy disc or DVD usually?

(i) Due to improved technology, hard disk stores much more data per square inch of recording surface.

(ii) A hard disk has large size (capacity), while floppy disk has small size (storage capacity). So to increase the storage, the size of storage device would also increase.

(iii) Hard disk has more than two disks while floppy disk contains single disk.

7. What is the main difference between telephone and cellular phone?

(i) Landline telephones are connected through a wire network while cell phones do not use wire network for connectivity.

(ii) Landline telephones are fixed and cannot be carried beyond a specific distance while mobile phones can be carried anywhere easily.

(iii) Landline cannot be connected to internet while smart phones can be connected to internet.

(iv) Landline is not easily available in case of emergency if the person is far away from the telephones. As cell phone is carried anywhere, it can be used in emergency.

10th Physics (New Book NBF)

Conceptual Questions: ch 10, 11, 12, 13, 14, 15, 17, 18

Numericals : ch 10, 11, 12, 13, 14, 15, 18

MCQs : ch 10, 11

Important Slos Based MCQs, questions, Guess paper

8. How data is stored in a Hard disk? Describe briefly.

Data is stored on a hard drive in binary code, using 1s and 0s. The information is spread out on the magnetic layer of the disk(s) and are read or written by the read heads that 'float' above the surface thanks to the layer of air produced by the ultra-fast rotation of the disk.