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## GSA-Test-3

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### Question No. 2

a) What are computer buses? Explain CPU as brain of computer?

(i) What are computer buses?

Computer buses work for transferring the data one place to another place. It's also word for communication.

There are three types of buses

(i) Address buses

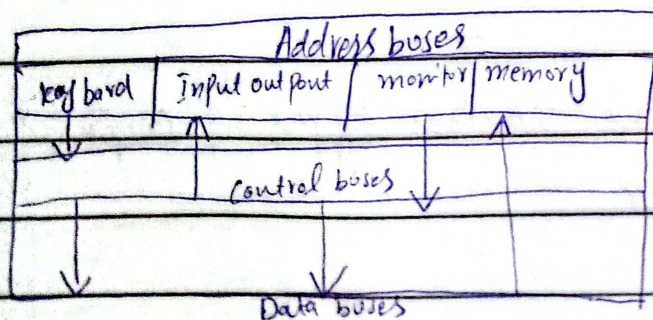
Address buses are used for locating and finding the data in CPU.

(ii) Data buses

Data buses work to store all data which is coming through the address buses.

(iii) Control Buses

Control buses work for communication between address and data buses.



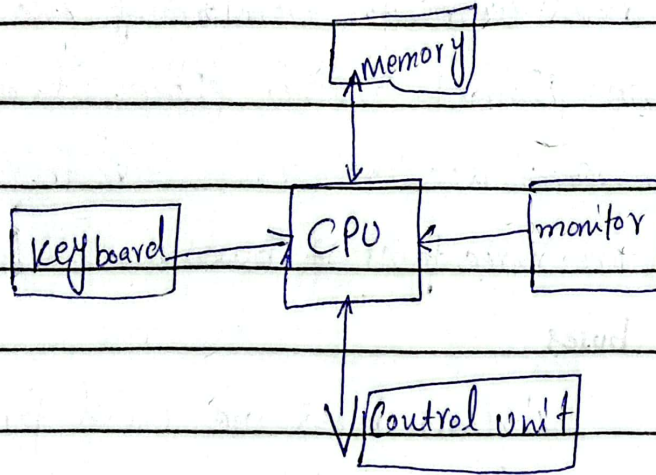


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(ii) CPU as a brain of computer

CPU is a central processing unit of the computer which works as the brain of computer.



All part of the computer including monitor, control unit, keyboard, memory are connected to the CPU which work on the bases of input and output. keyboard input to the CPU and CPU read the command through mother board and display on monitor. However, CPU is called brain of computer.

b) Describe various types of computers.

Answer

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There are various types of computers on the basis of size, memory capacity and speed.

(i) Super computer

It has large size. Memory of this computer is high and terabytes. It's speed is fast and measured by. It is used for complex situation like weather modeling.

(ii) Mainframe computer

It has large size typically house in data center. It's memory is high in gigabytes. It's speed is fast and used for business and financial transaction.

(iii) Minicomputer

It has small size than mainframe but larger than personal computer. It's speed is moderate and suitable for running business application. It is used for engineering application.



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#### (iv) Personal Computer

Desktops, Laptop and Work Stations are Personal Computer. It is used for general purpose such as personal use and business application. The speed of Personal Computer is different on the basis of Ram and Processor.

#### (v) Tablets and Smartphone

They are small in size and portable. Their memory capacity depending on phone but several are gigabytes.

They are used for communication, entertainment.



### c) How does a mobile phone work?

#### (i) Introduction of mobile phone

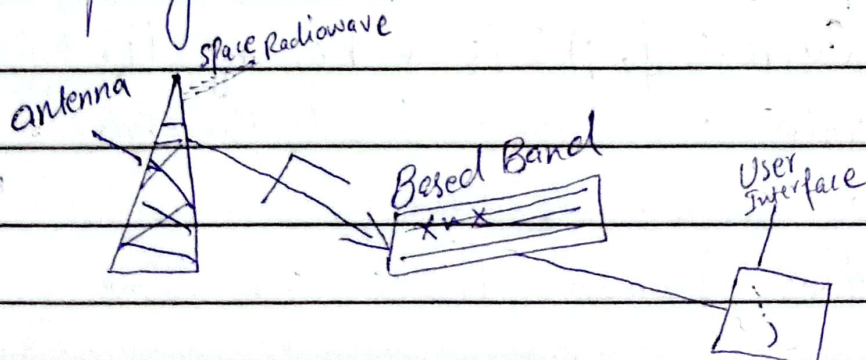
Mobile phone is a hand based device which is used for different purpose such as communication, entertainment. First Mobile phone was discovered in 1973 by J.S. Micro Modrella.

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## (ii) Working of mobile phone

Radio waves, Antenna, Subscription identification module play main role in the working of mobile phone. Besides, cellular network, Baseband Processor and user interface are actors of mobile phone. Firstly, user interface give a input on mobile screen for calling purpose. Next base band processor manage the request to user and radio wave. Thirdly, radio communication in space which are caught by Antenna stored into the base band and base band send to SIM. If mobile phone work then phone is ringing. Besides, if mobile phone off, no signal message will display on the screen.





6)

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(iii) Uses of mobile phone

It is used for communication.

It is used for entertainment.

It is used for business application.

d) What is <sup>x x x</sup> artificial intelligence and is it possible for artificial intelligence to outsmart human?

a) What is artificial intelligence?

Artificial intelligence refers to the development of computer systems that can provide perform tasks that require human intelligence.

These requirements includes learning, reasoning and problem solving technique.

For example: Chat Gpt and Robotic system.

b) Is it possible for artificial intelligence to outsmart human?

Currently, AI is enhancing its role in the world, therefore it can be possible that it can surpass the human. There are some



example which are evidence for artificial intelligence to outsmart human.

(i) Growing role of Chat gpt in the world

Chat gpt is a new phenomena which was introduced by AI in 2023.

Nowadays, Chat gpt is working very fast in the world. It is being used in universities, academeis and business.

Students easily find its study problem such as assignment, projects and question problems.

(ii) Using of AI in games like Chess

AI have defeated human in games like Chess and AlphaGo which is sign that AI can surpass the human.

(iii) AI role in Medical field

AI is being used in medical field such as treatment of ~~diagnosed~~ disease, using in x-ray machine.

(iv) AI uses in Industrial sectors

It is being used in industrial sectors such as in manufacturing, packing of

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food and mechanical and electrical engineering.

Question - 1

b Answer

Solution

$$\text{Person} = 30, 80$$

$$\text{Sugar} = 40 \text{ kg}, 320 \text{ kg}$$

$$\text{Days} = 10, ?$$

$$\text{Find days} = ?$$

Person	Sugar	Days
↓ 30	↑ 40	↑ 10
↓ 80	↑ 320	↑ x

$$\frac{x}{10} = \frac{30}{80} \times \frac{320}{40}$$

$$\frac{x}{10} = 3$$

$$x = 10 \times 3 = 30$$

Answer = 30 days



9)

d) Answer

Solution:-

$$\text{Average formula} = \frac{\text{Sum of Number}}{\text{Total number of the value}}$$

$$\text{Sum of 6 number is } 20 = 6 \times 20 = 120$$

Removing one number 1

$$5 \text{ is } 15 = 5 \times 15 = 75 \rightarrow \text{C}$$

How many number was removed = ?

$$x = 120 - 75 = 45$$

Answer number was removed =

45 Ans

c)

Answer

Solution:-

$$\text{Total value} = 370$$

$$\text{First and third Part} = 3:5$$

$$= 3x + 5x$$

Second part is  $\frac{1}{4}$  of third part

$$= \frac{1}{4} \times 5x = \frac{5x}{4}$$

$$\text{All parts} = \frac{3x}{1} + \frac{5x}{4} + \frac{5x}{1} = 370$$

Find  $x = ?$ 

$$\frac{12x + 5x + 20x}{4} = 370$$



90)

11)

$$= \frac{37x}{4} = 370$$

$$x = \frac{4}{37} \times 370 = 40$$

$$\text{First Part} = 3x = 3(40) = 120 \text{ Rs}$$

$$\text{Second Part} = \frac{5x}{4} = \frac{5(40)}{4} = \frac{200}{4} = 50 \text{ Rs}$$

$$\text{Third Part} = 5(x) = 5(40) = 200 \text{ Rs}$$



A

Answer

Solution:-

Let number of match played  $x = ?$

Won = 60%

Lost = 24 match

using percentage formula

$$\text{Total match} = (100 - 60\%) = 24$$

$$40\% (x) = 24$$

$$\frac{240}{100} (x) = 24$$

top

$$\frac{2x}{5} = 24$$

$$x = \frac{5}{2} \times 24 = 60$$

Total match played in one year = 60