

09/02/2024

Day: Friday

General Science  
Mock complete  
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(001)

Question no 1, Part II, Section 1  
Answer (a)

Black hole

It is a theoretical object of extreme density and gravitational field that nothing can escape from it. It was first discovered in 1994. Black holes are invisible and can be big or small. Scientist thinks that black holes formed when the universe began.

Stellar black holes are made when the center of big star falls in upon itself or collapse. This called super nova. A supernova is an exploding star that blasts part of the star into space. Also scientists think supermassive black holes were made at the same time as the galaxy they are in.

Answer (b)

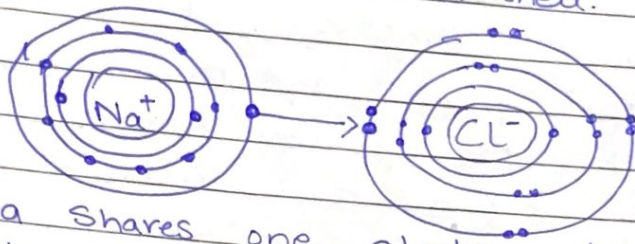
Octet rule

The tendency of atoms to prefer having eight electron in the valence shell is called Octet rule. When the atom do not have eight electron in valence shell. They try to gain or tend to react

and form more stable compounds.

### Table Salt (NaCl)

Octet rule is applied in forming NaCl, in which chlorine gains an electron that is lost from sodium atom in its outermost shell.



Na shares one electron to Cl for gaining the stable compound.

### Answer (c)

#### Uses of Microwave in Daily life

Microwaves are used in Ovens for baking of the food. Microwaves are also used in radars for receiving signals. Furthermore, it is also used in remote sensing, Wifi, Bluetooth, GPS and communication satellite.

#### Uses of Radio Waves

Radio waves are presently used in television, FM, AM radio broadcasts, and military communications. Radio waves are also used by mobile phones, wireless computer networks.

### Uses of X-rays in daily life.

X-rays are used in daily life for medical use to identify broken bones, radiation therapy for fighting against cancer. It is also used in airport security.

### Answer (d)

#### Main Agendas of conference

- 1) Identifying AI safety risks of shared concern by building a shared scientific and evidence-based understanding of these risks and sustaining that understanding as capabilities continue to increase.
- 2) Building respective risk-based policies across our countries to ensure safety in light of such risks. This includes pushing for increased transparency by private actors developing frontier AI capabilities, developing appropriate evaluation metrics, tools for safety testing and relevant public sector capability and scientific research.

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## Question no 3:

## Part (a)

COP-28 held in U.A.E in 2023,

The main objective of the COP28 was to take stock of the progress made by the parties on the implementation of the Paris Agreement.

The COP-28 achieved some historic outcomes:

- 1) establishment of a loss and damage fund.
- 2) fossil fuel Phase-out and increase of renewable energy capacity.
- 3) The launch of a \$30 billion private market climate capital, which will mobilize private sector investment in low-carbon and climate resilient projects, especially in emerging and developing countries.

Comparing COP27, with COP28, COP28 has the better policies and better findings for the better future.

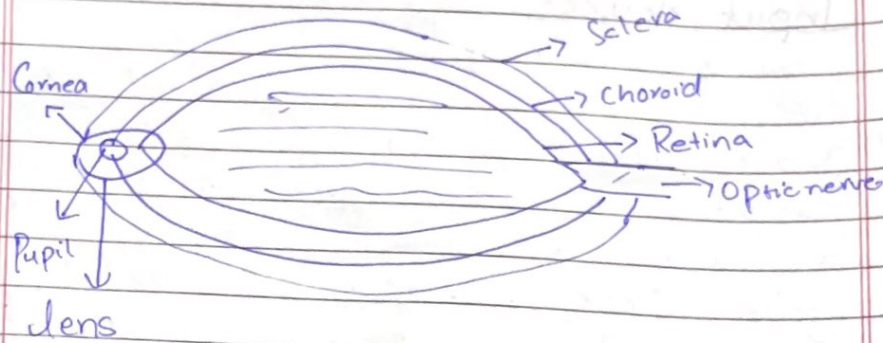
## Answer Part (b)

### I/O devices

Input devices are computer hardware devices that are used to input any command to computer system. Input devices are useful for performing functions of computing, they are used to communicate and perform tasks on the computer system. Some common input devices are keyboard, mouse, Joystick and Scanners. Any device that is used to input data in computer, is known as input device.

Output devices are computer ~~input~~ output devices hardware devices that are used to form results of computer system. Basically the output devices are used by computers to show the results of programs. Some common output devices are monitor display, printer and speakers.

Answer Part (C)  
Human Eye



**Cornea:** it is an outermost transparent layer which interacts with light waves. It is responsible for bending of light.

**Pupil:** is a small hole from where light enters into eye.

**Lens:** It is responsible for focusing of light.

**Retina:** Innermost layer, most sensitive layer, at the retina conversion of light waves into image takes place with the help of cones and rods at photoreceptor.

Answer (d)

### Causes of Water Pollution

There are several causes of water pollution including sewage and wastewater of domestic use. Such as water from toilets, sinks or showers, Industrial waste is also one of the biggest cause of water pollution. Industrial waste includes leads, mercury and other chemicals that are highly dangerous for both humans and aquatic life. Agriculture is the primary source of water pollution, agrarian waste are extremely dangerous. Furthermore animal waste, Dumping, Heavy metals and global warming are the cause of water pollution.

### Section II

Question no 7

✶ Answer (a)

11, 13, 17, 19, 21, 23

10, 28, 91, 370, 1855

(b) ✶ Answer

Solution

Cloth merchant bought shirt = 35

Price of shirt = 280

Sold price = 308

Total cost invested

$$35 \times 280 = 9800$$

Total price of Profit

$$35 \times 308 = 10780$$

Now total price of Profit

Invested - Profit

$$10780 - 9800 = 980$$

In Percentage

$$\frac{980}{9800} \times 100 = 10\%$$

~~10780~~

9800

The total profit is 10%.

Part (c)

Solution

Actual age = 10

Chronological age = 12

IQ = ?

$$IQ = \frac{\text{Actual}}{\text{Chronological}} \times 100$$

$$IQ = \frac{10}{12} \times 100$$

$$= 83.33$$

Part (d)

Aslam work = 10 days

Ali work = 15 days

Nagam work = 20 days

Total days of working together = ?



Pg 70

Part (d)

Answer

Average height of 30 boys = 150 cm  
correct mean.

$$\frac{150 - 165 + 135}{30} \Rightarrow -10\%$$