

Part - II (Section - I)

Q.3
QNS = a

• Global warming

The rising temperature of the planet "Earth" due to the spread of harmful gases is known as global warming.

→ Causes of Global warming

- | | |
|---|-------------------------|
| → | Excessive Use of CO_2 |
| → | Solid waste |
| → | Industrial waste |
| → | Environmental Pollution |
| → | Harmful gases |
| → | Loss of biodiversity |

→ Consequences

• Glaciers Melting

As the consequences of

a global warming glaciers
are melting at a fast
rate

Antarctica's physical appearance
is changing due to
the global warming".
un-spokes person

However, Himalayas glaciers
is also melting down
gradually : reported by
BBC

• Wild fire

only in 2023 a large number
of wild-fire has recorded
at in different of the world.

including

↳ Greece

↳ Hawaii

↳ Spain

↳ Australia

↳ Canada

• Heat wave

with rising temperatures heat
wave is increasing

Italy

this year has

recorded strong phase of
heat wave
Source = AL JAZEERA

The countries suffer with heat waves
include China, Japan, California
India.

where the month of July is
recorded as the hottest month of
2023 in the world.

Q. Ans

• Universe

The totality of every
thing including matter,
time, space, planets, stars
every thing is known as
"Universe"

• Method to Measure
Age of universe

2 Methods

Big bang
theory

Hubble's
Constant

According to the bigbang theory the age of universe is estimating as 14 billion years.

while some scientists believes that the universe is expanding at a very fast rate. According to them some dark forces pull them away with lots of energy at a constant rate which is observed by the "Hubble Constant"

Ans. 3 = "C"

! "Semi-Conductors"

Semi-conductors are material which have a conductivity between conductor and insulator.

Examples

Silicon, Germanium

Uses

- 1- use in mobile chips
- 2- batteries
- 3- devices (electronic)
- 4- computers
- 5- semi-conductors are also use in "Ceramics"

d. Eclipse

An eclipse is the alignment of the celestial bodies. The alignment of 3 celestial bodies is known as "Syzygy".

Eclipse is an astronomical event that occurs in space. It occurs when one astronomical body covers the shadow of another.

Solar Eclipse

occurs when moon comes

Lunar Eclipse

occurs when earth obstructs

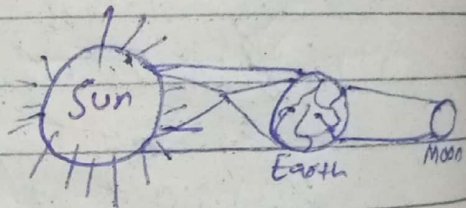
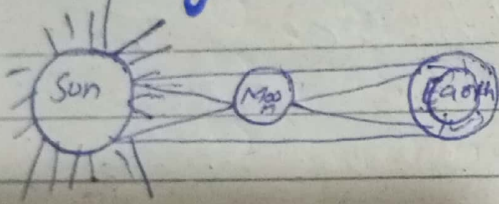
between the earth planet and the sun while orbiting the earth.

the light of the moon coming from sun while orbiting sun. As earth is tilted:

- Duration
about 5 to 7 minute

a few hours

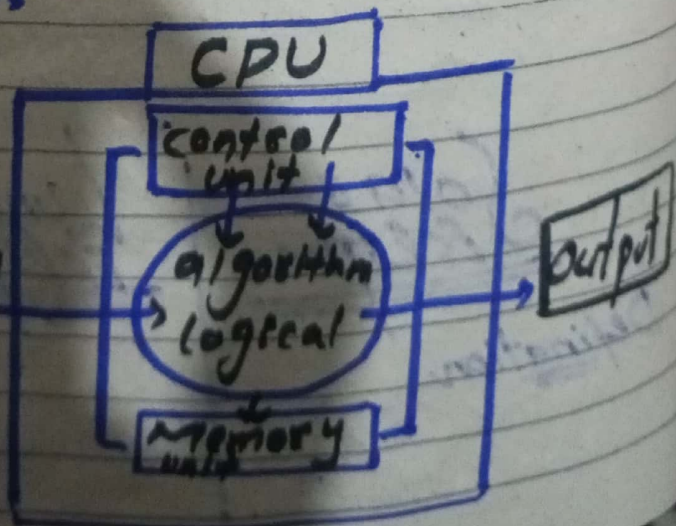
- Diagram



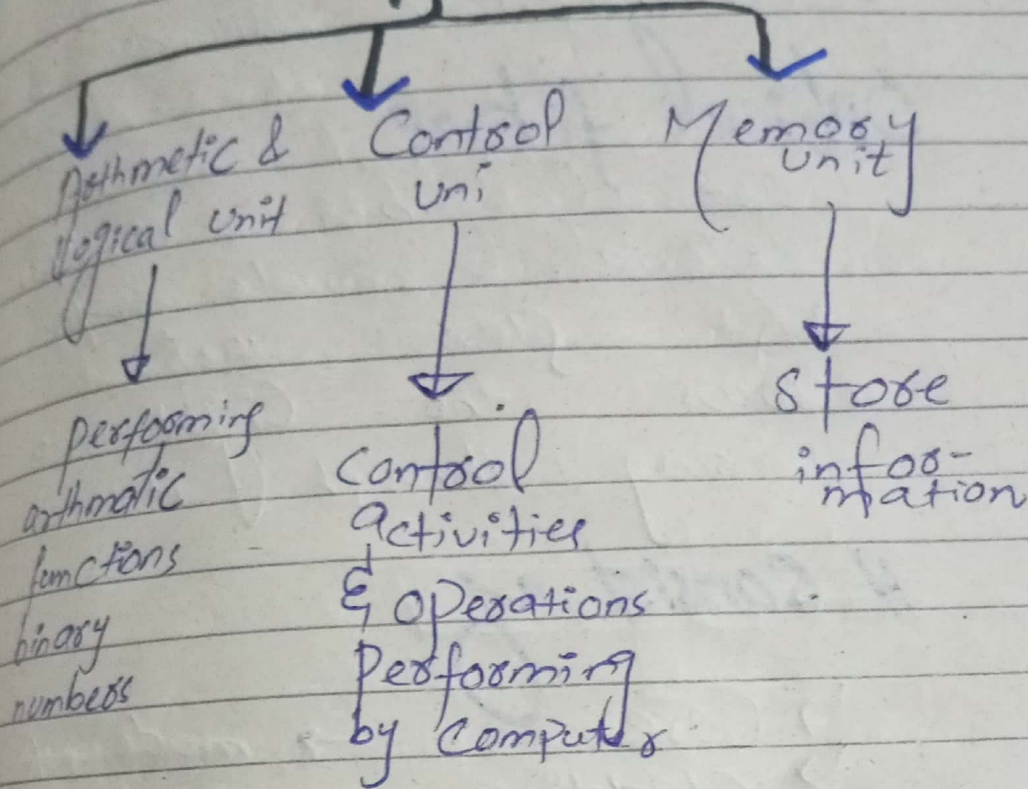
Qno: Ans

a)

Block Diagram



CPU



Input devices

includes Memory units: Softwares etc

Output devices

includes hardware of the computers: Monitors, Printers etc.

b. Optics

Optics deals with the study of light. It is about the interaction of the light

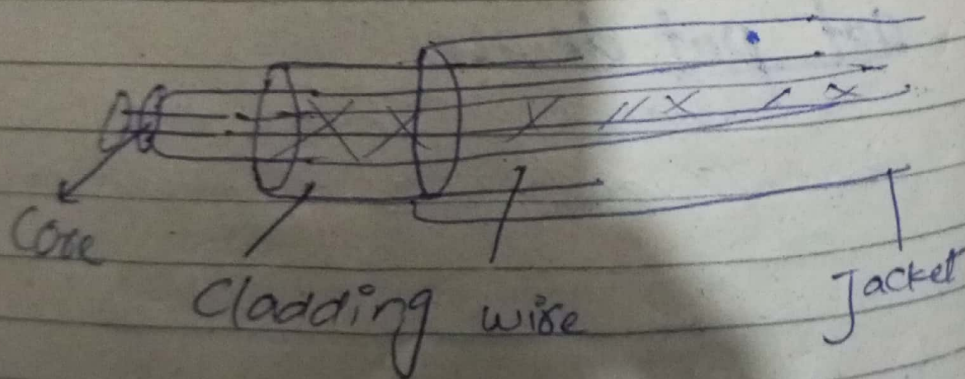
with ultraviolet and
electromagnetic radiations.

Optical fibre

Optical fibre is the material made up of glass that allows the light to pass through it.

It consists of

- ↳ Core → made up of glass
- ↳ Cladding → glass
- ↳ covering wire → wire
- ↳ Jacket → ceramics



WORK

The light passes through the core made up of

a glass

The purpose of glass is to keep light

within the core.
The ^{process} phenomenon is either
carried out by the
phenomenon of

Optical fibre

Total internal
refraction

internal
refraction

The process keeps the
light within core
while moving or passing
through the optical fibre

When the light passes
in the glass at a high
speed it bounces by
the boundaries; however
the ~~esp~~ escape donot
possible because of internal
refraction and it bounce back.
while these electromagnetic
signals while reaching
at the ends of fibre again
turns into picture and
information.

c. Solid waste management

The process of retreat the municipal or industrial solid waste in a proper manner is known as the solid waste management.

Methods

- ↳ Recycling
- ↳ Land fill
- ↳ incineration
- ↳ Compost

(Recycling)

The process is carried out by different solid waste management authorities where the solid waste got recycled e.g

(Land fill) } Plastic Products

Some people have proper drainage systems of waste e.g Landfills. In this method there would be the space which is particularly specified for this.

(Incineration)

at a very high temp about 1200°C and above the solid waste is treated in large ovens and reuse.

(Compost)

The food items (wasted) decompose and retreat to make it useful.
e.g. fertilizers etc.

d. **GPS**

It is known as global positioning system.

Purpose

Its purpose is to know the present time, location on earth.

Components

- Satellite
- Control Unit
- Receiver

GIS

It is a geographical survey device or known as geographic survey system.

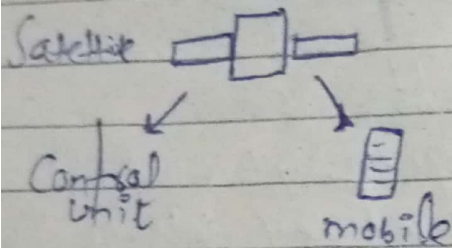
Its purpose is to know about the place where the particular project is carry out. e.g. the locality surroundings etc.

Hardware, software data, people, method etc.

Work

Satellites orbits
Sun (3) transmit
the signal in
the receiver
getting from
Control unit

Create info-
mation, a
data base
featured
model.



(Section - II)

Q no. 8
Ans

BROTHER

Q DGSNQA

SISTER → iUKSKD

Q 5 Data: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12}

Total card = 12

One card drawn

Probab = (i) 8 = ?

ii) even no = ?

iii) perfect sq

iv) no

v) numb less than 13

$$\text{Prob of Event (8)} = \frac{\text{Prob of occurrence of an event}}{\text{Total possible outcomes}}$$

$$= \frac{8}{12}$$

$$= \frac{2}{3}$$

(b) Even Number

$$= \frac{\text{Prob of occurrence of an event}}{\text{Total of outcomes}}$$

$$\text{Prob of (Even no.)} = \frac{6}{12} = \frac{1}{2}$$

$$\text{Prob of (Perf. sq)} = \frac{2}{12} = \frac{1}{6}$$

$$\text{Prob of (- no)} = \frac{0}{12} = 0$$

$$\text{Prob of (no. less than 13)} = \frac{12}{12} = 1$$

Total area of Parimeter

$$2(12) + (15)2 = 24 + 30 = 54 \text{ cm}$$

Mean median mode & range

Mean

$$\text{Average} = \frac{\text{Sum of obs}}{\text{Total no of observations}}$$

$$\frac{15 + 15 + 16 + 16 + 17 + 17 + 18 + 19}{9}$$

$$= \frac{159}{9} = \frac{53}{3} = 17.6$$

→ Median = 16

→ Mode = 16

→ Range = $X_m - X_o$

maximum - minimum value

$$19 - 15 = 4$$

Q no. (b)

by using arrow method.

→ constructing a table

Persons	day	Sugar (kg)
↓ 30	10	40
↓ 80	?	320 kg

let unknown = x

$$\frac{x}{10} = \frac{30}{80} \times \frac{320}{40} = \frac{3}{8} \times \frac{320}{40}$$
$$x = \frac{18}{4} \Rightarrow 4x = 180$$

$$x = 30$$

$x = 30$ day

80 persons will eat
320kg sugar in 30 days