

Date

(1)

(9)

Paper: General Science and Ability (GSA)

SECTION-B

Q.6

(a)

present price of Washing Machine = Rs. 8748

Depreciation in Rate per year = 10 PC

What was the price before three years = ?

We know that

$$\Rightarrow \frac{\text{Given percent} \times \text{total value} - i}{100}$$

Putting the values in formula.

$$x = \frac{10}{100} \times 8748$$

~~100~~
8
~~25~~
+25

~~100~~
2183.5
4374
~~8748~~

25 | 2187
2

018
18

7
6

10

$$x = 874.8$$

\Rightarrow So, the price of machine depreciated Rs. 874.8 per year.

(2)

So, the price will be depreciated in three years

$$\begin{array}{r} 274.8 \\ + 874.8 \\ \hline 1149.6 \\ 874.8 \\ \hline 2624.4 \end{array}$$

So, the total price depreciated in three years is = Rs. 2624.4

So add Rs. 2624.4 with the present price.

$$\begin{array}{r} 8748.0 \\ + 2624.4 \\ \hline 11372.4 \end{array}$$

So, the price of washing machine three years ago was Rs. 11372.4

(B) (2)

| Name | Age | After |
|-----------|------|----------|
| daughters | x | $3(x+5)$ |
| Father | $4x$ | $4x+5$ |

Current age of daughter = x

Current age of father = $4x$

After 5 years

So, $3(x+5)$ — (i)

$4x+5$ = (ii)

$3(x+5) = 4x+5$

$3x+15 = 4x+5$

$15-5 = 4x-3x$

$10 = x$

So, the current age of daughter is = 10 years.
put the value of x in equation (ii)

$4(10)+5 = x$

$40+5 = x \Rightarrow$ So, the current age of

$x = 45$ father is = 45 year

→ Then of further after five year, he would be = 50

The daughter also becomes $10+5 = 15$ years

So, the father is $\boxed{3 \cdot 3}$ times of

his daughter after further 5 years

$$\begin{array}{r} 3 \cdot 3 \\ 15 \overline{) 50} \\ \underline{45} \\ 5 \end{array}$$

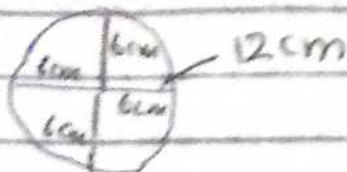
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(C)

Diameter of football = 12 cm

Find its volume = ?

Football =



∴ We, football in the circular form and

we know that;

$$\text{Volume} = \pi r^2 h$$

∴ r = radius

h = height

So, putting the values in equation

$$\text{Volume} = 3.14 \times (6)^2 \times 12$$

$$= 3.14 \times 36 \times 12$$

Volume of football will be

$$\boxed{1356.48 \text{ cm}}$$

$$\begin{array}{r}
 \times 12 \\
 \hline
 72 \\
 360 \\
 \hline
 432 \\
 \times 3.14 \\
 \hline
 1728 \\
 1432 \times \\
 1296 \times \\
 \hline
 1356.48
 \end{array}$$

(1)

Train 'A' cross a man in = 27 seconds

Train 'B' cross a man in = 17 sec

Both train cross each other in = 23 sec

find the ratio of speed = ?

(b)

Q. 8

(d)

The Base of pyramidal rectangular length = 7 cm

width = 5 cm

Height = 10 cm

Volume = ?

So, we know the volume of rectangular =

Volume = width \times height \times length.

Putting the value

$$= 7 \times 5 \times 10$$

$$\Rightarrow 350$$

So the volume of the
rectangle is 350 cm

$$\begin{array}{r} \times 50 \\ 7 \\ \hline 350 \end{array}$$

(a)

→ Ali stands away from tree = 10 meters

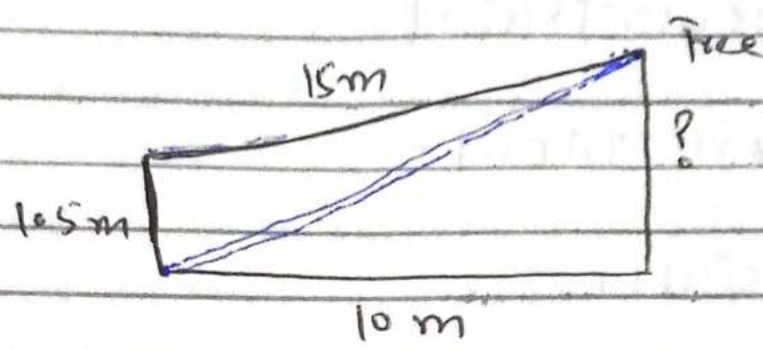
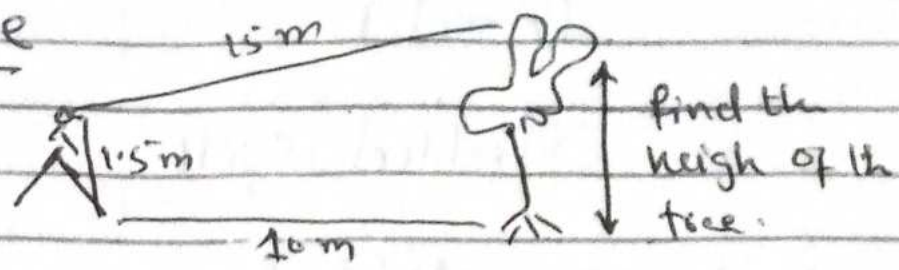
→ Height of Ali = 1.5 m

→ distance from his eyes to the top
of the tree is = 15 m

→ find height of the tree.

(7)

Diagram



We know that $B^2 = Per^2 + Hyp^2$

$$Per^2 = Hyp^2 + Base^2$$

$$P^2 = (16.5)^2 + 10^2$$

$$P^2 = 258.5 + 100$$

$$\sqrt{P^2} = \sqrt{258.5 + 100} = 16.07 \text{ m}$$

$$\begin{array}{r}
 \times 16 \\
 16 \\
 \hline
 96 \\
 16 \times \\
 \hline
 258.5
 \end{array}$$

So, the height of the tree will be

16.07 meter

(7)

(8 → cb)

Jumbled spell

i) Soncvoisient =

ii) Eivenpbraost =

iii) Uoasiuldc =

iv) UNSPRESE = UNPREESS

v) NMILAOPC =

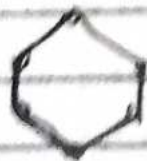
—————x—————x—————

8 (c)

Total line of symmetry in Hexagon and octagon = ?

Line of symmetry in circle = ?

1) Total line of symmetry in Hexagon

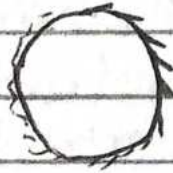


These are six line of symmetry in hexagon

(9)

ii) total line of symmetry in octagon

iii) Total line of symmetry in a
= Circle.



There are infinite numbers of symmetry
line in a circle.



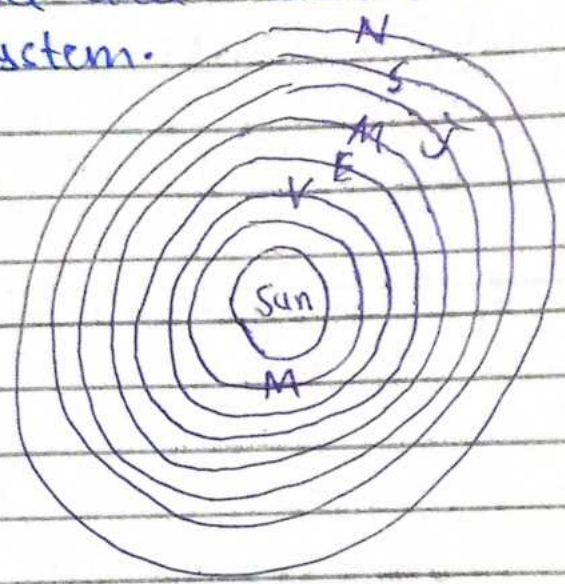
PART-II
SECTION-A

Q. NO: 4 (A)

Solar System

A) Introduction

Sun is the center of solar system from which; planets, dwarf planets, meteoroid and asteroid revolve is called solar system.



B) Planets Solar System.

P) Planets revolution around the sun

There are Seven planets revolve around the sun in a sequence of; Mercury, Venus, Earth, Mars, Jupiter, Saturn and Neptune.

ii) Characteristics of planets (ii)

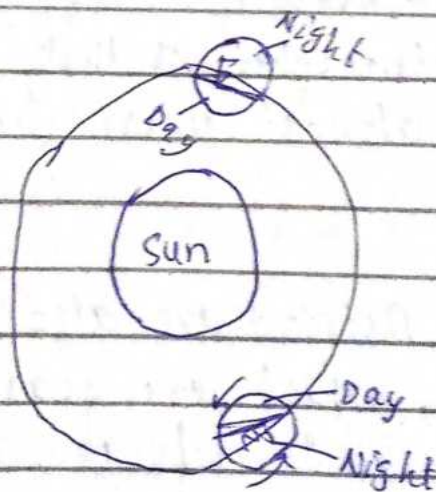
Mercury is the smallest one in size and Jupiter is the biggest one in size.

Venus is the hottest planet.

Earth is the only planet, which supports life.

All of planets have their own moon, which revolve around particular planet. i.e. earth has one moon and Jupiter has 67 moon.

iii) How day and Night come in the earth.



Earth revolve around itself and the sun as well. Half portion of the earth every time exposed to earth, where is the day and in the remaining half portion obscured from the sun is night there.

G) Dwarf planet

In the beginning dwarf planets were included on the normal planet. But later it was discovered the dwarf planet do not have a definite path on which it revolves like the other planets. It is 5° tilt and changing its path continuously.

Example: pluto

D) Meteoroid

Meteoroid are gigantic rocks revolve around the sun. The size of meteoroid can be small and large. When it comes toward earth or other planets than it burns in the atmosphere of that planet. When reaches it, has almost burn due to frictions.

E) Asteroid

Asteroid are also gigantic rocky elements, which are near with the sun. The size of Asteroids are larger than meteoroid.

F) Conclusion

Sun is the center of solar system, from which planets, dwarf planets, meteoroid and Asteroids revolve. There are billions of solar system which form galaxies. These galaxies adds and forms the universe.

(13)

Q. NO: 4

(B)

A) Introduction

Pituitary glands ~~are~~ is situated in frontal brain in the human being, which is also called the "master gland". Because it controls most of the glands in the human body such as; oxytocine, calcitonine, serotonin and a number of other as well.

B) The Importance of pituitary Gland:

i) Location of Pituitary Gland:



Pituitary gland is situated in the left side of the frontal of the brain.

ii) Secretion of Oxcitocine Hormone.

pituitary glands secretes oxcitocine hormone. Oxcitocine hormone helps during delivery and as a source of food in the lactating mother.

iii) Master Gland

pituitary gland is very small in size equal to a pea. But it plays very important roles in the regulating of other hormones. Therefore, it is called the master gland in the human body.

iv) Control growth Hormone

pituitary glands regulate growth hormone, especially in children and teen ages to promote their growth on the equal basis.

v) Bone Health

pituitary glands also assist in the bone health by controlling the growth and adrenaline hormones.

vi) Stress regulate

pituitary glands regulate and minimize the stress in the human body through the secretion of Adrenocorticopic hormone.

c) Conclusion

pituitary gland is called the master gland due to its importance. It controls the secretion of reproductive, stress and growth hormones.

Q. NO: 4

(C)

A) The difference between RAM and ROM

| ROM | RAM |
|------------------------------------|---------------------------------|
| Abbreviation | Abbreviation |
| • Read only memory | • Random access memory |
| • Saved in the system | • Later saved |
| • Permanent Memory | • Temporary memory |
| • cannot be erase with switch off. | • can be erase with switch off. |
| • called primary memory | • called secondary memory. |

B) USB

USB is the Secondary memory which can be link and de-link with the computer as per requirements. The space in USB can be rang from 2GB upto 34GB. It is easily available in the market. which can be filled and formate as per the requirement of the users.



(16)

Q.4 (d)

A) Introduction

Cop-29 was conducted in November, 2024 to counter the impact of climate change. Conference on All parties (COP) conduct every year to find out solutions for the climate change and implement it properly. In Cop-29, it was concluded that to reduce the global temperature by 1.5°C . By reducing the carbon footprints, adopting renewable energy resources.

B) Cop-29 Target to Limit the temperature 1.5°C :

In cop-29, the world leaders decided to limit the temperature upto 1.5°C . The following outcomes are deduced.

i) Adoption of renewable energy resources to reduce carbon footprints:

It was agreed in cop-29 to reduce the carbon footprints through adopting the renewable energy resources. For the sector of transportation, construction and industrialization should be replaced with

the renewable energy resources to attenuate the emissions of CFC.

ii) Loss and Damage Fund

The loss and damage fund increased from \$100 bn to \$200 bn to rebuild the infrastructures damaged by the climate change in one way or another.

iii) Goal of Cop-29

The main goal of Cop-29 was to reduce the pace of raising in the global temperature. It is raised 1.5°C since 1850 till today. In the near future due to industrialization and transportation the carbon emission has increased. So, in the Cop-29, it was deduced to ~~reduce~~ replace the non-renewable energy resources by the renewable energy resources to control the raise of temperature.

c) Conclusion

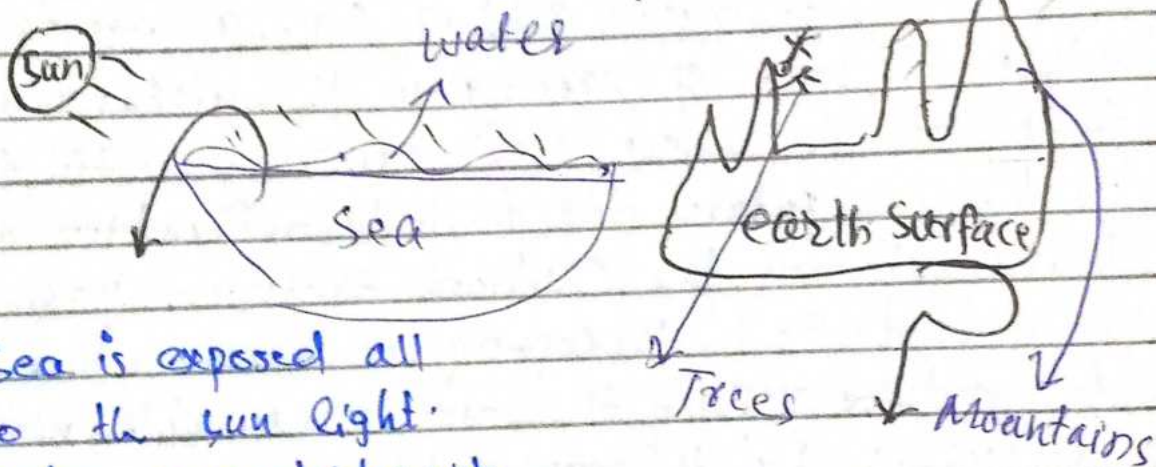
Cop-29 goal was to reduce the temperature from the raise of 1.5°C in the future ahead to attenuate its impacts on the global.

Q.5 (A)

A) Introduction

The surface temperature of the sea raises due to the sunlight in the day time. Because sea cannot absorb sun light and soon the temperature raises. which results the flow of wind from high pressure areas to lower pressure areas and causes the tropical cyclones.

B) The Sea Surface Temperature raise



- Sea is exposed all to the sun light. water cannot absorb heats. As a result the pressure increases and warm air moves toward the earth where has low temperature and low pressure.

- Earth temperature not raise as compare to sea. Because of mountains and trees the sun reflect back soon and cannot absorb by the whole surface.

c) How, it affects the formation of cyclones

Wind moves from high temperature areas to lower and vice versa. As a result cold wind moves toward high temperature areas and left a vacuum filled by the warm winds. So, mostly, the sea winds are warmer with which move toward the earth with 300 km/h which moves the surface water with itself and causes the tropical cyclone.

Example

Mostly the tropical cyclone comes in the coastal areas of Japan, ~~South Asia~~ New Zealand, and Madagascar.

d) Conclusion

Sea temperature raise, because it cannot absorb the sun light and the temperature raises above the surface. Which moves toward high low pressure areas and ~~move the~~ sea wind moves the surface water with itself and causes tropical cyclones.

(20)

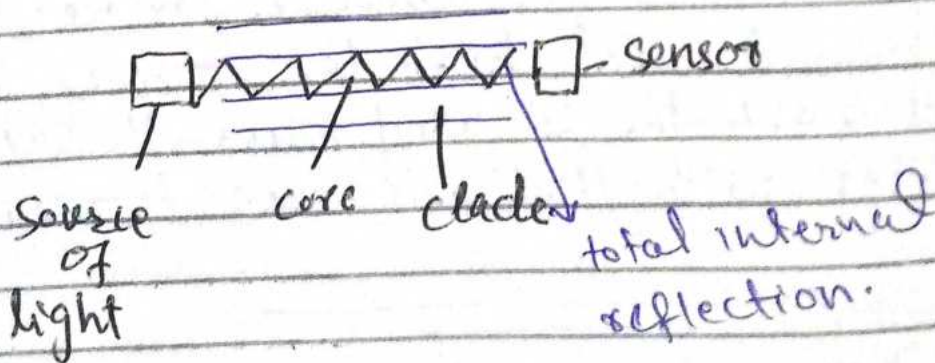
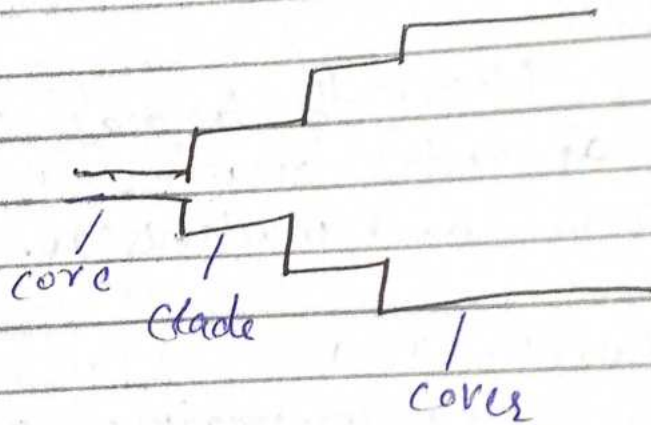
Q.4

(B)

Optical Fiber

Optical fiber works through the principle of total internal reflection.

Diagram



Light core is made of silica glass, which

(21)

reflects light. When a source releases a light than it travels through total internal reflection received and interpreted by the sensor. As a result the communication conveyed.

A) Advantages of Optical Fiber.

-) It is secure
- Less time consuming
- No risk of hack
- Use for sensitive informations.
- Use for test in the medical field e.g. Angiography etc.

B) Disadvantages of Optical Fiber.

- It is fragile
 - Expensive
 - Need of cable
 - Issue to convey information situated far away.
-
-

Q.5 (d)

A) Food Additive

The addition of flavour, taste, ~~a~~ chemical and other elements in the food is called food additive.

B) What are adds

In this era there are more than 25,000 food additives for different purposes. Such as, taste, flavour, colour and ~~stop~~ chemicals to stop the growth of bacteria.

C) Why food additives are add.

- To Improve its quality.
 - make it, delicious
 - Save from the ~~the~~ detrimental of temperature
 - Advance of bacteria restrained.
 - Make it more attractive for the customers.
-

(B) Food preservation

Food preservation is a technique to preserve food from the contamination through the heating, freezing and packing.

A) How to preserve food

- food can be preserved through heat giving.
- Also through freezing to stop the growth of bacteria.
- Food can also be preserved through a dignified packing in plastics or any other things.

The end