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General Science and AbilityPart IISection II:Question No. 6

(a)

Given Data:

current age of son = 30 years

5 years ago, age of the son = 25 years

Age of father was thrice = 3×25
= 75 yearsTo Find:Current age of the father = $75 + 5$
= 80 years \Rightarrow Answer

(b)

Mean of 10, 30, 4, and 50

Solution:

Formula: $m = \frac{\text{Sum of quantities}}{\text{no. of quantities}}$

$$m = \frac{10 + 30 + 50 + Y}{4}$$

$$50 = \frac{90 + Y}{4}$$

Using cross multiplication:

$$200 = 90 + Y$$

$$Y = 200 - 90$$

$$\boxed{Y = 110} \Rightarrow \text{Answer}$$

(c)

(iii) Find the missing terms:

(i) 2, 6, 18, 54, _____

The given series of numbers follow the multiplication of "3".

Therefore,

$$54 \times 3 = 162$$

The missing term is 162.

\Rightarrow 2, 6, 18, 54, 162

ii) 3125, 256, 27, 4, 1

Solution:

5th value is $1^1 = 1$

4th value is $2^2 = 4$

3rd value is $3^3 = 27$

2nd value is $4^4 = 256$

1st value is $5^5 = 3125$

So, the desired value is 3rd, which is 27.

Hence,

3125, 256, 27, 4, 1

(a)

Given Data:

Product of two numbers = 320

Their ratio = 1:5

To Find:

~~Square~~ Difference between square of these two numbers = ?

~~Suppose~~

⇒ The two numbers 8 and 40 have

the product of 320.

⇒ The ratio of 8 and 40 is
1 : 5

Now,

Difference of their square = ?

$$(40)^2 - (8)^2 = 1600 - 64$$

$$= 1536 \Rightarrow \text{Answer}$$

Question No. 7

(b)

Given Data:

Men = 195

Daily Hours = 10

Days = 20

To Find:

Number of men employed = ?

Days = 15

Hours = 13

Solution:

Men	Hours	Days
195	10	20
x	13	15

$$\frac{x}{195} = \frac{10}{13} \times \frac{20}{15}$$

$$\frac{x}{195} = \frac{200}{195}$$

$$\boxed{x = 200 \text{ men}} \Rightarrow \text{Answer}$$

(c)

Given Data:

$$A = \{a, e, i, o, u\}$$

$$U = \{a, b, c, \dots, z\}$$

To Find:

$$A' = U - A$$

$$= \{a, b, c, \dots, z\} - \{a, e, i, o, u\}$$

$$= \{b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, w, x, y, z\}$$

(a)

Given Data:

Scooties sold at Rs 9600 each

20% profit in one scottie

20% loss in the second scooter.

To Find:

gain or loss percentage in total?

Solution:

$$= \frac{20}{100} \times 96000$$

$$= 19200 \rightarrow \text{profit}$$

Original price of 1st scooter

$$= 96000 - 19200$$

$$= 76800$$

Original price of 2nd scooter

$$= 96000 + 19200$$

$$= 115200$$

Total price = 76800 + 115200

$$= 192000$$

Total %age of profit - loss

$$= \frac{19200}{192000} \times 100$$

$$= 10\%$$

$$96$$

$$10$$

Total percentage = 10% \Rightarrow Answer

Question No. 2

(c)

Balanced diet:

diet which is
The wholesome, safe, and enriched
with nutrients is called balanced
diet. The components that should
be the part of diet are
carbohydrates, proteins, vitamins, and
minerals. ~~etc.~~ The standard intake
for an individual is 2700 calories
per day. The lack of balanced
diet may lead to malnutrition
or obesity. Pakistan is at the
2nd rank in the world in obesity.
Numerous cases of malnutrition
are also reported in the
country.

Reasons:

- Lack of Awareness: It is the major reason behind the lack of

the balanced diet because due to low literacy rate people are not capable to manage ^{food with} all the desired components.

- Poverty:

Poverty is another major cause behind this lack of awareness.

A majority portion of our population is daily wages earners. Until and unless this issue will not be resolved, there are minute change to overcome the diet issue. According to Sustainable Development Goals (SDGs) by United Nation, the world is determined to ~~at~~ uproot poverty from the third world countries. The fourth goal in SDGs is particularly related to this concern.

• Conclusion:

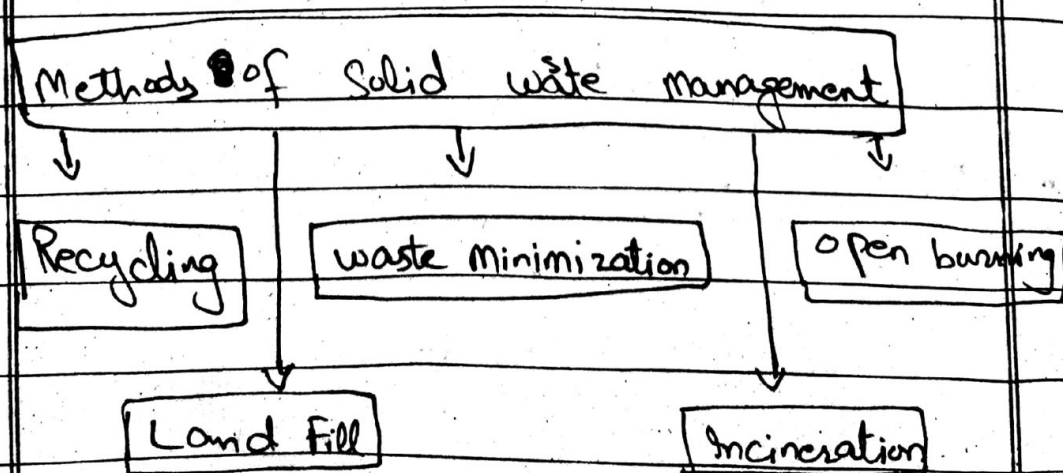
In a nutshell, balanced diet is necessary to be the part of body to nourish mentally and physical. Different effective steps

have been taken to ensure the presence of balanced diet.

(b)

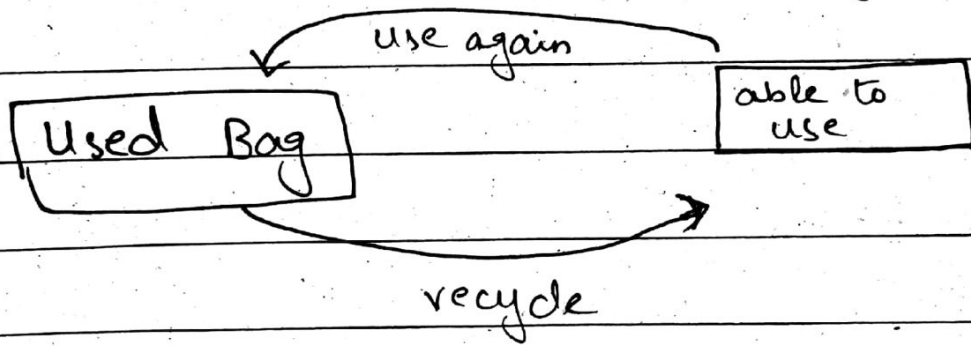
Solid waste management:

Solid waste management is the procedure to reduce or manage the waste material because its open presence may cause severe diseases like Jaundice etc. Different measures have been taken ~~to~~ in regard of this task. Following are the some methods of solid waste management:



Recycling:

Recycling is the method to reuse the waste material like plastic bags, tin containers, glass etc. Instead of throwing them out reuse them to reduce the waste. This process is not difficult to be done or time consuming.



This cycle can be repetitive

waste minimization:

waste minimization does not mean to reduce the usage of products but is to use those products that can be recycled or reused. This will also be helpful for this waste management strategy..

Open Burning:

Open Burning is another

method to ~~not~~ manage the water.

In this process, the fire is ignited in the garbage dumps at open places. It has also a side effect as well which could be the cause of air pollution.

Landfill:

Landfill is effective way to manage the waste material. This method is also used the developed states including United States. In this process, waste is dump into a landfill which has the baseline of protective layer that serves as a barrier between wastes and ground water.

Incineration:

It is a waste treatment process that involve the combustion of waste material.

In particular, this is done in the industries where it is also referred as the "thermal treatment".

It is also used to mitigate

hazardous wastes i.e. chlorinated hydrocarbons, oils, solvents, medical wastes and pesticides.

Conclusion:

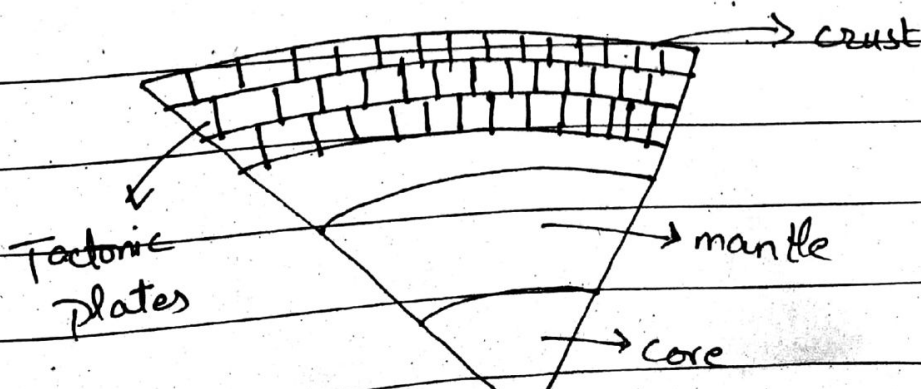
while summing up, it is necessary to take influential measure to keep the atmosphere clean and free from diseases.

Question No. 4

Earth quakes:

Due to the eruption of lava, the movement tectonic plates occur which causes the vibration in earth's crust and that is referred as the earth quake.

Generation of Earthquake:



Earthquake may be generated due to various reason but every time it will be caused due to the vibration of tectonic plates.

- Volcanic Eruption:

When the magma (molten lava) come out from beneath the earth, it causes a huge explosion of gases. This is a major cause of earth-quake in the world.

- Earth's Soil Surfacing:

Sometimes earth itself shakes to fill the gapes among the soils to balance the surface.

This might cause the vibration of tectonic plates.

Tsunami:

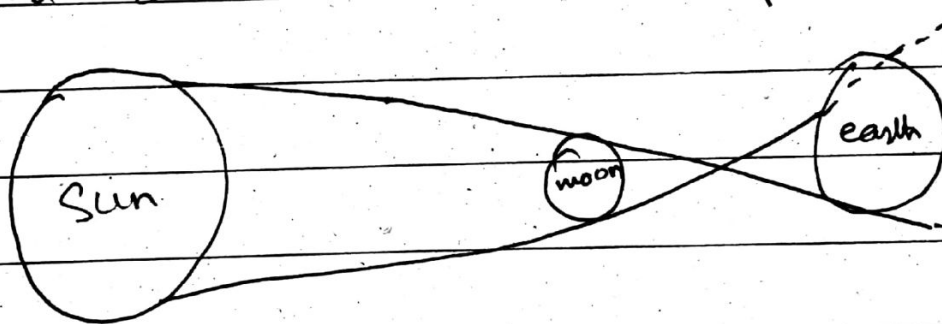
Tsunami is a water storm and occurs due to the movement of sea ground. It also produces due to the eruption of gases from the sea land like the volcanic procedure in the mountains.

region.

(c)

Solar Eclipse:

while moving ~~the~~ in their own axis, ~~the~~ earth comes behind the shadow of moon that cause solar eclipse. The part of the earth that is behind the shadow will observe the solar eclipse.



The above diagram depicts the solar eclipse.

Lunar Eclipse:

On lunar eclipse, the point of these heavenly bodies change and earth comes in front of the moon while revolving in its

DATE: _____

axis and due to the shadow
on moon, it causes lunar
eclipse. penumbra shadow

