

Mock

General Science & Ability

Q&A No: 2

Dengue

Definition:

Dengue is a virus which is caused by Dengue Mosquito. Commonly female known as *Aedes aegypti* Causative agent.

Female Mosquito *Aedes aegypti* is causative agent of dengue.

It incubates into blood regions and spreads into body and affects organs.

Symptoms:

Symptoms of dengue include high fever, appearance of red spots on the body and coughing.

Prevention:

Clean water pot in garden daily.

Solid waste thrown in bin.

Use safety measures for prevention against Mosquito.

Immunization:

Immunized ~~your~~ body with Dengvaxia for prevention of Dengue.

b) Explain Dark matter & Dark energy

Dark matter:-

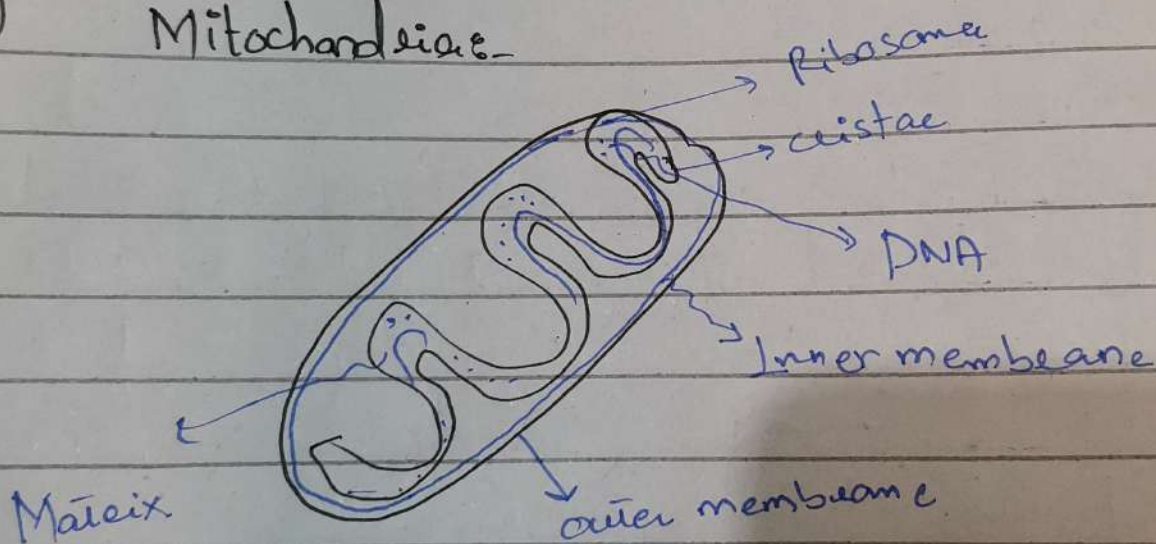
Dark matter exist in universe and extended in galaxies. it constitute the 27% of universe responsible for gravity.

Dark energy:-

Dark energy maintain the expansion of universe.

It constitute 68% of universe.

c) Mitochondriae-



Mitochondria is self replicating and present in prokaryotes as well as eukaryotes

Reaction Mechanism:-

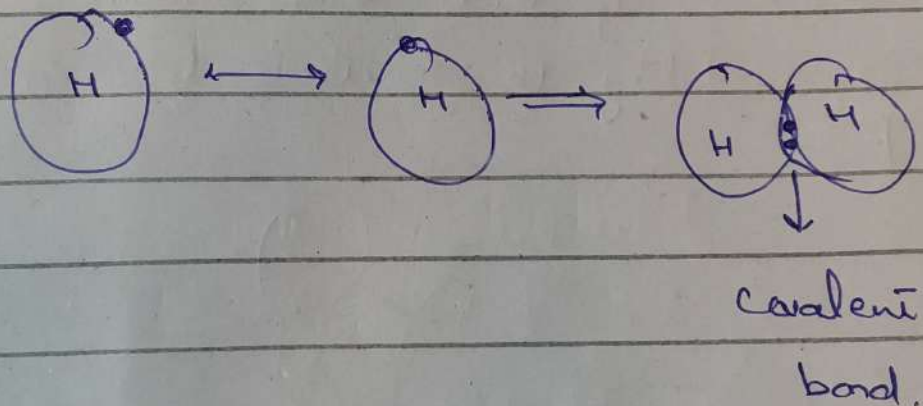
Various reactions, such as kreb cycle, aerobic respiration and fatty acid metabolism occur there

Powerhouse of cell:-

Mitochondria is considered as powerhouse of cell because inorganic energy constituent ATP broke down into ADP and release energy - and later on absorbs energy and again become ATP. That's why called Mitochondria is used as powerhouse of cell.

d) Covalent bond?

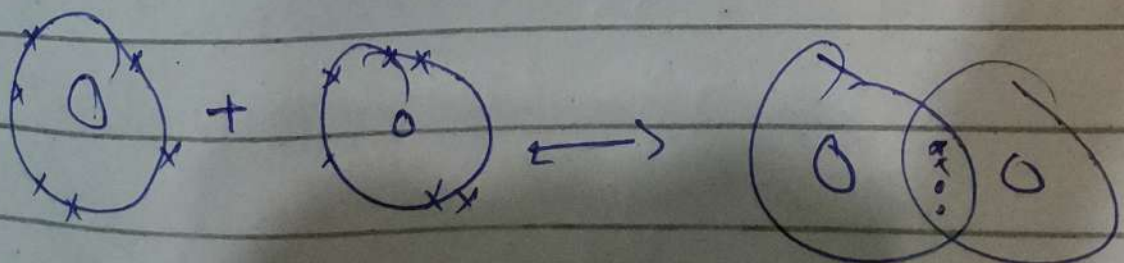
definition: when two non metal atoms combine and share single or pairs of electron and form bonds called covalent bond.



Types :

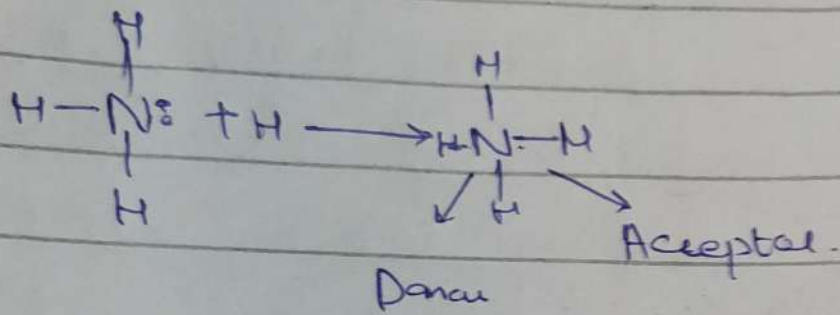
Multiple covalent Bond:

Form bond By sharing two pairs of electron.



Coordinate covalent bonds:-

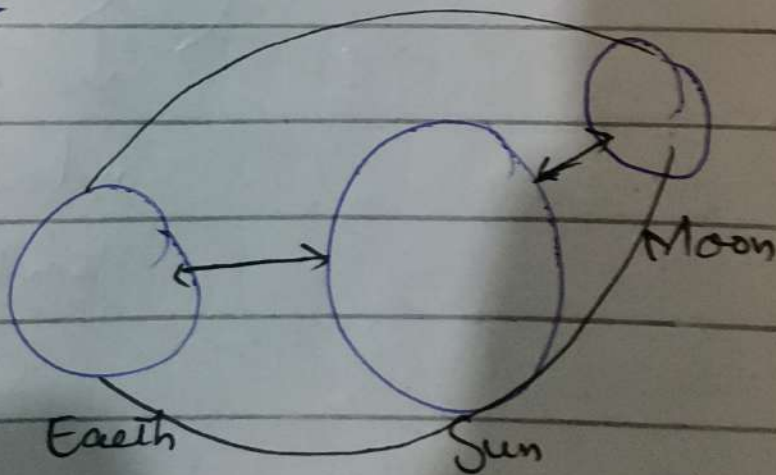
In which one atom has lone pair of electron and other has unfilled orbital to accept lone pair:-



Q: NO_2^-

a) Lunar Eclipse

Lunar Eclipse is a condition when Sun come in between of Earth and moon-
Moon visibility to earth is less and appear red



b) Enzymes:-

Enzymes are used as catalyst which used to speed up the reaction. word "enzyme" came in last of enzyme.

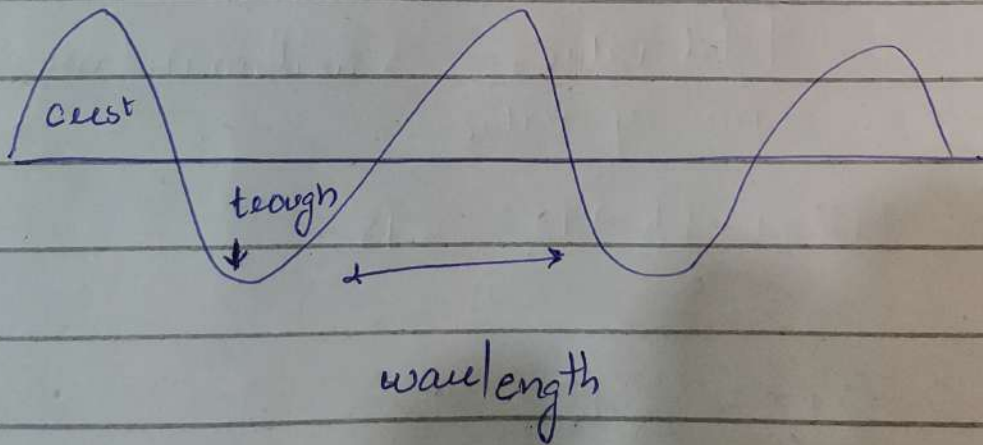
Examples:-

Amylase: Enzyme involved in digestive activity.

urease & For urea decomposition.
pepsin & act on protein.

c) Electromagnetic Radiation:-

Form of energy which is all around us. Such as light rays, radio waves etc.



EMR: Spectrum:-

Electromagnetic waves can be either the frequency or wavelength of their oscillations to form Electromagnetic Spectrum.

403-
d) ~~Are~~ Earthquake & volcanoes Eruption
are interconnected?

Yes! Earth has tectonic plates - under these
tectonic plates have crust of earth which
contain volcanoes

So when these tectonic plates moves these
cause earthquake and crust damage and
volcano eruption occur.

So earthquake & volcano eruption are interconnected

Section II

Q: No 86

2. Determine the "k" value of the arithmetic
means $9, 8, 10, k, 12$ is 15

$$\frac{\text{Total value}}{\text{no. of value}} = \text{arithmetic mean}$$

$$\frac{9+8+10+k+12}{5} = 15$$

$$\frac{39+k}{5} = 15$$

$$39+k = 15 \times 5$$

$$39+k = 75$$

$$k = 75 - 39$$

$$k = 36$$

B) Mixture contain Sugar & water

4:3 after add 10l water then
became 4:5

$$\text{So } \begin{aligned} 4x &= 3x + 10 \\ \frac{4x}{3x+10} &= \frac{4}{5} \end{aligned}$$

$$20x = 4(3x + 10)$$

$$20x = 12x + 40$$

$$20x - 12x = 40$$

$$8x = 40$$

$$x = \frac{40}{8}$$

$x = 5$ liter of Sugar
Soln.

C) volume of football with a radius 12 cm.

$$V = \frac{4}{3} \pi r^3$$

$$V = \frac{4}{3} \pi (12)^3$$

$$V = \frac{4}{3} \pi 1728$$

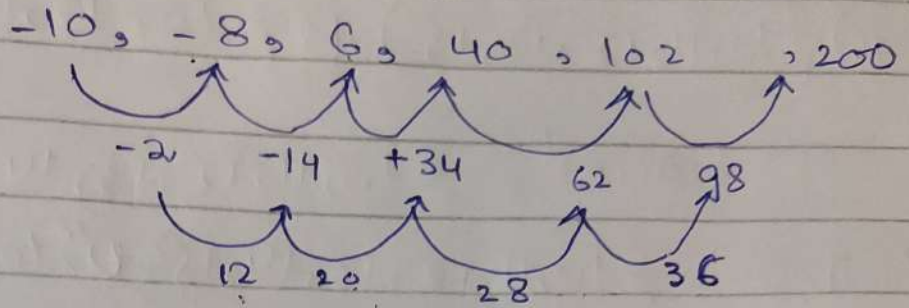
$$\frac{4}{3} (1.3)(3.14)(1728)$$

~~7234~~

7234.56 Ans- volume of football

d) Next Series:

-10, -8, 6, 40, 102?



Missing Series is 200-

Q: NO: 8

a) Charge = $\pounds 20 + 4n$

window = 7

Charge: $\pounds 20 + 4(7)$

= $20 + 28$

= $\pounds 48$

So Brian charge $\pounds 48$

B-

C - Verify

$$(A \cup B)' = A' \cap B'$$

$$(A \cup B)' = (\{10, 11, 12, 13, 15\} \cup \{10, 12, 14\})'$$

$$(A \cup B)' = \{10, 11, 12, 13, 14, 15\}'$$

$$(A \cup B)' = \{10, 11, 12, 13, 14, 15\}' \cup \{10, 11, 12, 13, 14, 15, 16, 17, 18\}'$$

$$(A \cup B)' = \{16, 18\}$$

$$A' \cap B'$$

$$A' = \{10, 11, 12, 13, 14, 15, 16, 17, 18\}' \cap \{10, 11, 12, 13, 15\}'$$

$$A' = \{14, 16, 17, 18\}$$

$$B' = \{10, 11, 12, 13, 14, 15, 16, 17, 18\}' \cap \{10, 12, 14\}'$$

$$B' = \{11, 13, 15, 16, 17, 18\}$$

$$A' \cap B'$$

$$\{14, 16, 17, 18\} \cap \{11, 13, 15, 16, 17, 18\}$$

$$A' \cap B' = \{16, 18\}$$

Hence prove that $A' \cap B'$

d- Total 12 triangle.