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CSA - Objective

- 1) C
- 2) B
- 3) D
- 4) D
- 5) C
- 6) B
- 7) A
- 8) A
- 9) D
- 10) A
- 11) B
- 12) B
- 13) A
- 14) B
- 15) D
- 16) C
- 17) D
- 18) C
- 19) B
- 20) D

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General Science and Ability - Mock

Improve paper presentation

Make clear headings

Increase length

Write complete logic and steps in math portion

Q No-2. Distinguish the following terms:

i. RAM - Random Access Memory is the permanent memory of a computer system. Examples include hard disk.

ROM - Read Only Memory is the temporary memory of a computer system. Examples include floppy disk, CD's, USB.

ii. Network and Internet

Network - a network is a chain of connections which provides access to the internet.

Internet - The internet is the world wide web which enables information to reach any person anywhere in the world.

iii. GPS & GIS

GPS - Global Positioning System is a system which provides maps, routes and locations to navigate a geographical area.

G-IS :- Global Interface System provides a connected platform on which anyone could share their geographic location.

#### iv) Byte & Nibble

Byte :- a byte is part of the binary language/system of a computer. It is made up of 8 nibbles.

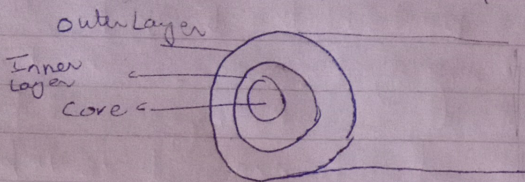
Nibble :- a nibble is a smaller <sup>unit</sup> system of the binary system. It is smaller than the byte. A combination of nibbles make up a byte.

#### v) Natural Satellite and Artificial Satellite

Natural Satellite :- is a naturally occurring or present satellite or surveillance entity. Moon is the natural satellite of the Earth.

Artificial Satellite :- is a man made satellite. This satellite is usually used in space exploration and for search and surveillance.

b. A note on optical fibers



An optical fiber is made up of copper or aluminium. These optical fibers are used as electric wires, telephone wires, cable wires, etc. Lenses are also used in these fibers to reflect unnecessary energy and let electricity pass through it.

c. Fat Soluble Vitamins:

Vitamin A - Vitamin A is a <sup>Fat</sup> soluble vitamin, it gets absorbed <sup>in the water</sup> in a human body. Sources of Vitamin A are <sup>Fat</sup> soluble vitamins A are <sup>meat</sup> fishes, vegetables,

Vitamin C - Vitamin C is a <sup>Water</sup> soluble vitamin. This vitamin <sup>gets</sup> absorbed in the <sup>fat</sup> in a human body. Sources of <sup>Water</sup> Vitamin C are citrus fruits such as oranges

d. The working of kidney in human physiology

In human physiology, the kidney performs the function of cleaning the bad blood which is pumped out of the heart. Once

the blood has been cleared it is transferred to different parts of the body for the proper functioning of its organs. The human body consists of two kidneys and for their proper functioning, it is important that <sup>the</sup> water intake is high.

Q. No. 4 The goals of COP-26, 2021 on climate change:

- i) The highest carbon dioxide emitters of the world would cut down their emission by half.
- ii) The global temperature of the world must be brought down below  $1.5^{\circ}\text{C}$ .
- iii) The melting of the glaciers must be stopped as it is leading to extreme effects such as floods and intense weather patterns.

The goals of COP-27, 2022 on climate change

These goals basically built on the goals presented in COP-26, 2021, though they were more clear and action-oriented in nature.

- i) Fossil fuels emissions should be brought down

ii) Alternative sources of energy or green energy should be explored and developed.

iii) Measures should be taken to avoid extreme weather conditions.

b) Some methods of Solid Waste management are:-

i) Recycling the solid waste produced

ii) Using less polythene bags and more paper bags.

iii) Using solid waste for the purpose of making fertilizers.

iv) Making use of solid waste as a raw material for production of different goods.

v) Burning solid waste to produce energy.

c) Common Causes of Water

Pollution:

i) Throwing waste in water bodies

ii) Depletion of aquatic life in seas, ponds, rivers, etc.

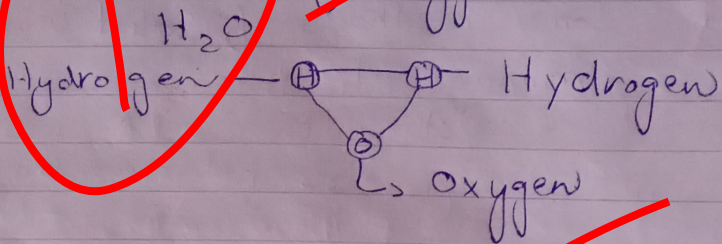
iii) Over-fishing for commercial purposes.

iv) Construction of factories and residential areas near water bodies.

v) Oil-spillage in water.

d. Covalent bond in water and its angular structure

A water molecule consists of two atoms of hydrogen and one atom of oxygen.



The angular structure of a water molecule results from the manner in which the two atoms of hydrogen and one atom of oxygen are combined together.

Q. No 7

a) 
$$\frac{n + n+1 + n+2 + n+3 + n+4 + n+5 + n+6}{7} = 20$$

$$\frac{7n + 21}{7} = 20$$

$$7n + 21 = 140$$

$$7n = 140 - 21$$

$$7n = 119$$

$$n = \frac{119}{7} = 17$$

Largest of these numbers =  $17 + 6 = 23$  Ans //

b) D is C's sister.

c)  $7, 12, 19, 28, 39, 52$  Ans //

d) A, B, C, and D  $\rightarrow$  ratio  $\rightarrow 5:2:4:3$

$$C = 1000 + D$$

$$D = \frac{3}{14}$$

$$1000 + D = \frac{4}{14}$$

$$(1000 + D) \frac{3}{14} = \frac{4}{14} D$$

$$\frac{3000}{14} + \frac{3D}{14} = \frac{4D}{14}$$



$$\frac{2000}{14} = \frac{1}{14} D$$

$$3000 = D$$

$$3000 = \frac{3}{14} B$$

$$B = \frac{2}{14}$$

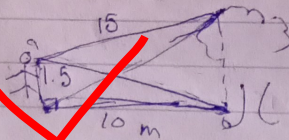
$$\frac{3000 \times 2}{14} = \frac{3}{14} B$$

$$3000 \times 2 = 3B$$

$$B = \frac{3000 \times 2}{3}$$

$$B = 2000 \text{ Ans } \underline{\underline{3}}$$

Q. No. 8



$$ab^2 = 1.5^2 + 10^2$$

$$ab^2 = 2.25 + 100$$

$$ab^2 = 102.25$$

$$ab = 10.11$$

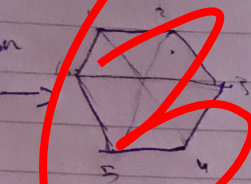
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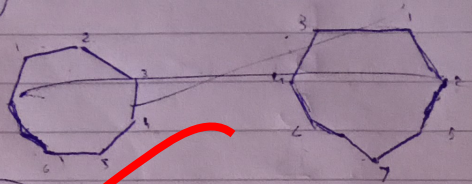
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c) Total number of lines of symmetry in a regular hexagon and Octagon

Hexagon

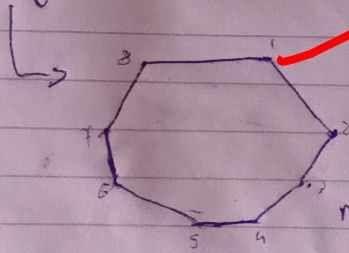


9 lines of symmetry



Circles has 360 lines of symmetry.

Octagon



No lines of symmetry

d) Volume of the Pyramid

$$= \frac{46.6 \times 230.6 \times 230.6}{3} = 2598,551.45 \text{ m}^3$$