

Part - II

Question - 2:

(a)

Answer: As electricity has changed all the dynamics of life, Artificial Intelligence is also doing the same in new ways. It has following impacts on life:

Accessible: AI is widely accessible in every sector of life. It is working in education, medicine, manufacturing and many other sectors.

Essential for production: Electricity is necessary for industries to run. Similarly, AI is now must for logo creation, designing and helping in decision making.

Impact on life: AI is impacting life in all dimensions from economic growth to thinking, so our life is under the enchantment of AI.

(b)

Answer:

CPU is called brain of computer and it works similarly like human brain.

Data processing: CPU process the data and instructions sent by software. Human brain process information sent by sensory cells.

Controlling: CPU controls computer working and brain controls body.

Memory management: CPU manages memory in RAM and brain keeps memory in short term and long term.

Data Transfer: CPU transfers data to the parts of computer and brain sends it to glands, hormones and organs.

Therefore it is said that both work in similar manner.

(c)

Answer:

Balanced diet:

A balanced diet is the diet that fulfills the nutrient requirement of the human body and protects against diseases.

"Let food be thy medicine."

(Ancient greek Proverb)

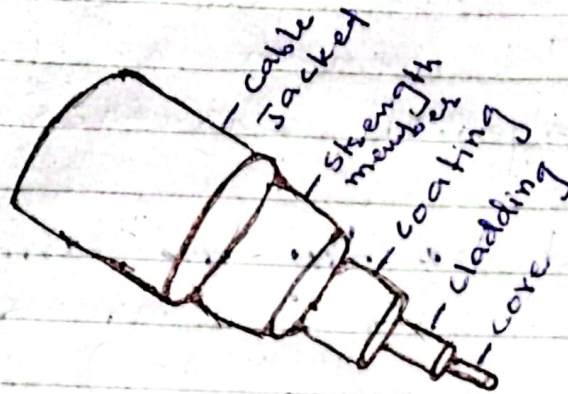
-Deficiency of Vitamins and irregularities -

Vitamins	Irregularities
Vitamin - A	Night blindness
Vitamin - B	Beri Beri
Vitamin - C	Skin diseases, Scurvy, gum bleeding

(d)

Answer:

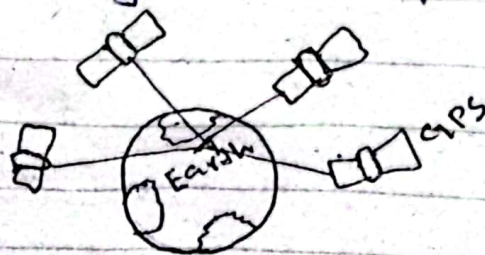
Optical fibers:-



Working method:

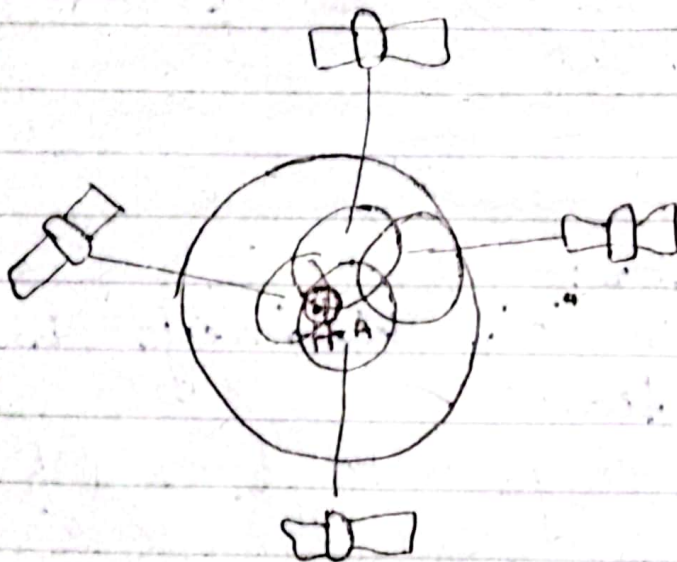
Fiber optics work under the phenomena of internal reflection. Light travels from the one end of the wall to the core of cable. This light bounces off the walls of cable repeatedly.

GPS: Global positioning system is a satellite which provides information about locations through navigation. This is US owned system.



Measurement of 2D and 3D locations:

Satellites work on triangular or tetra-angular principle. First the location is detected then the information is shared to the location center, which finds out the position of the person on earth.



Question. 4

(a)

Answer:

Bile:

Bile is a juice created by

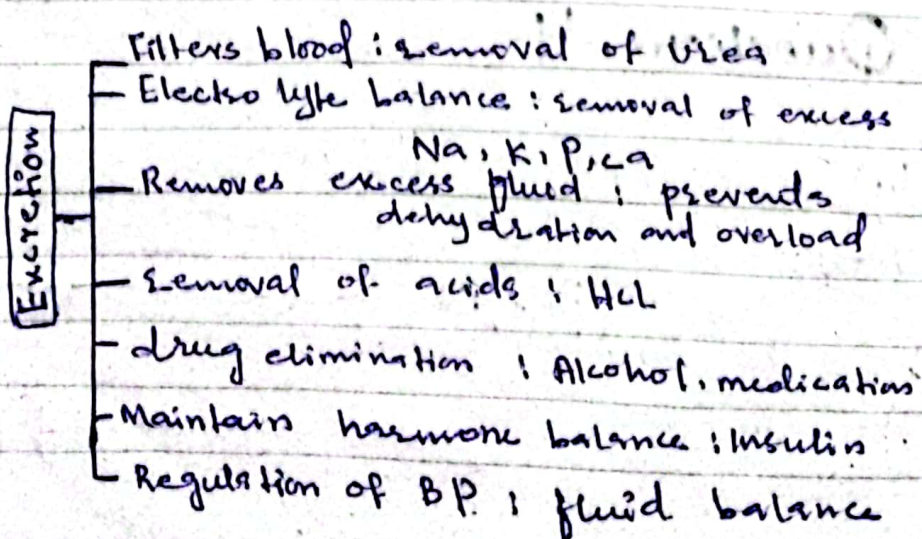
liver and stored in gall bladder.
It plays role in digestion and absorption of fats and fatty acid into smaller components.
Liver produces One litre of bile daily. When food is sent to small intestine liver releases bile through bile duct into small intestine. Bile is responsible for different colors of human faeces.

(b)

Answer:

Role of Kidneys in Excretion:

Kidneys plays significant role in excretion.



(c)

Answer:

Forms of Solid waste management:

- ① Reduction: Solid waste production should be reduced so solid waste management ^{can not} should not be a hazardous issue.
- ② Reuse: Instead of plastic or paper products reusable products like steel glasses, plates, cloth bags should be made compulsory to use.
- ③ Recycle: Waste material should be recycled so energy and environment should be saved.
- ④ Waste to Energy production: Solid waste can be turned into energy sources. For example solar plates can be made from those wasted products. Appliances can be made.
- ⑤ Landfills: The non useable

material can be ~~thrown~~ buried inside the land for decomposition. The process should be done in non-residential areas.

(d)

Answer:

(i) Anemia:

Anemia is a disease caused by the deficiency of iron. In this condition RBCs are reduced than normal level.

(ii) Appendicitis:

This is the condition of inflammation of appendix, a small organ attached to the large intestine. This causes severe abdominal pain and nausea and leads to the removal of appendix.

(iii) Spleen:

Spleen is a purple and reddish color organ on upper left of abdomen. It is responsible for filtering of the

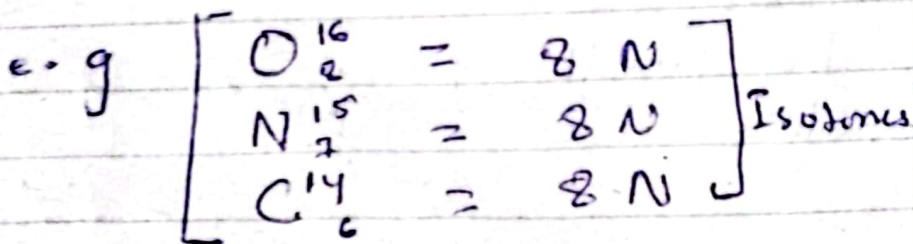
blood and storing RBCs.

(iv) Myopia:

It is disease of near-sightedness. In this near objects are clearly visible but distant are blur.

(v) Isotones:

Isotones are the atoms which have same number of neutrons but different number of protons in nucleus.



Section - II

a)

Data:

Toy blocks = A, B, C, D

Ratio = 4:7:3:1

Difference between A and C : 50

We know that solution:

A = 4 and C = 3

$$\therefore 4 - 3 = 1 = 50$$

By multiplying 50 to all ratios we get :

$$A = 200$$

$$B = 350$$

$$C = 150$$

$$D = 50$$

So the number of $B = 350$

Answer

(b)

Data:

Original cost = 80 \$

discount price = 15 %

Sales tax = 10 %

Final price = ?

Solution:

first we will find discounted price

$$= 80 \$ - 15 \%$$

$$= 15 \% \text{ of } 80 \$ = 12 \$$$

$$\therefore 80 \$ - 12 \$ = 68 \$$$

Now will apply sales tax on the discounted price.

$$= 68 \$ + 10 \%$$

$$\therefore 10 \% \text{ of } 68 \$ = 6.8 \$$$

$$\therefore 68 \$ + 6.8 = \boxed{74.8 \$} \text{ is final price}$$

Answer

(c)

Data =

Distance = 42 km

Speed = 36 km/hr

Departure time = 4 pm

Arriving time = ?

Solution:

If the train's speed is 36 km then in 1 hour 36 km will be covered.

$$= 42 - 36 = 6 \text{ km}$$

If 36 km distance is covered in 60 minutes, then 6 km will be covered in 10 minutes

\therefore 4 hr + 10 = arriving time

\therefore Arriving time = 5:10

\hookrightarrow Answer

(d)

(i) Keninsuperted:

Superintend

(ii) hweti :

¹⁻

White

Question - 7:

(a)

Data:

$$V = ?$$

$$R = 30 \text{ cm} = 0.3 \text{ m}$$

$$H = 1 \text{ m}$$

Solution:

$$V = \pi r^2 h$$

$$\pi r^2 = (0.3)^2 = 0.9 \text{ m}$$

$$V = 3.14 \times 0.9 \times 1$$

$$V = 3.14 \times 0.9$$

$$V = \boxed{2.826} \text{ Answer.}$$

Volume of cylinder = 2.826 -

(b)

Data:

Average age of 3 boy = 15 y

Ratio = 3:5:7

Age of youngest boy = ?

Solution:

IF average age of 3 boys is 15
then total age = $3 \times 15 = 45$

By ~~multiplying~~ ^{dividing} total age with the ~~number~~ ^{average} age we get

$$45 \div 15 = 3$$

we will multiply ratio with 3 to get age of the boys

$$(3:5:7) \times 3$$

$$= 9, 15, 21$$

\therefore The age of youngest boy = 9 years
Answer

(c)

(i) 8, 19, 52, 151, 447

8, 19, 52, 151, 448 is right

\therefore the wrong number is 447

(ii) 11, 13, 17, 19, 23, — .

11, 13, 17, 19, 23, 25, 29, 31, 35...