

General Science and Ability.

(Q No 14)

(a)

Role of heart and blood vessels

(i) Heart is the one of the major organs of human body which is used to pump the blood.

(ii) Initially blood is in de-oxygenated form and heart convert ~~blood~~ from de-oxygenated to oxygenated form.

(iii) It provide high pressure to blood. It is main circulatory organ of the body.

Part of heart / Chamber

Heart consists on four chambers

- (i) Left atrium ii Right atrium
- iii left ventricle iv) Right ventricle

Left Side of heart:

Left side of

heart has oxygenated blood.

Right side

Right side of the blood
has de-oxygenated blood.

Bicuspid and Tricuspid

Both the bicuspid and tricuspid
prevent blood to backward
direction.

Pulmonary arteries

It give the way to blood towards
heart before pumping.

veins

The Blood vessels which transfer
the blood from body to heart

Arteries.

These vessel which transfer the
blood from heart to the body.

These vessels works after pumping
of the heart.

It carry oxygenated blood.
to wards but veins carry de-oxy
genated blood from body to
the heart

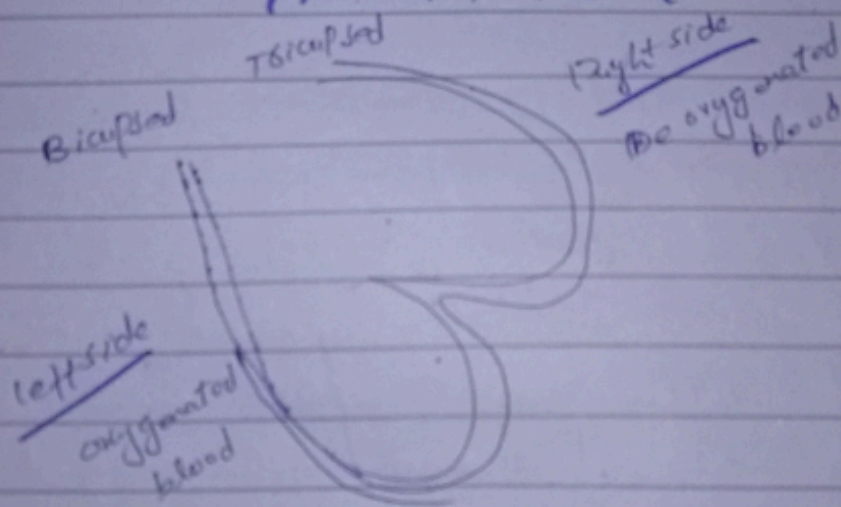
Capillaries.

These are the thin, soft and middle blood vessel which carry both oxygenated blood and de-oxygenated blood.

Pulmonary veins.

These blood vessel carry ~~de~~ oxygenated blood from heart to body

Human heart Structure



What is cyclone

(B)

Cyclone is a tropical wind which has low pressure and

originates from water body in the south and indo-oceans.

It has 120 km/hr speed.

It is more disastrous and catastrophic form.

It does not touch with ground Surface and affected coastal communities because it originated from water.

It is colorless disaster.

Formation of cyclone

i) Movement of tectonic plates

Typically it is formed in oceans ~~because~~ tectonic plates inside the ocean surface come in movement and when they collide with each other then cyclone emerged from the water body.

(ii) Earthquake within the surface of ocean is another reason behind cyclone formation.

iii) Gases exchange within the

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Ocean surface is the third
reason behind the formation
of cyclone.

Aquatic life ~~is~~ very difficult
~~during~~ cyclone time

Cyclone middle latitude and longitude
are less disaster's because its
speed 100 km/hr.

(C) Functions ?

Carbohydrates:

It provide energy to body
because it contain glucose

It main^{tain} the functions of
other human organ because it
provide them energy

It play important role in
human rational decisions and
consciousness because it provide
energy to human brain.

Thus, carbohydrates is necessary
for all functions of other
human organs.

Source = wheat, rice,

ii) Protein: (amino acid)

It not only provide energy to human body but also immunity.

It play important role in human organ repairness and growth.

It also play role in harman balancing and growth.

Source: Meat, Fish, egg.

iii) Fats: (Lipid)

It is also called fatty acid.

~~These~~ **These** are high energy providing ingredients.

It used to ~~solubal~~ **solubal** the fat **solubal** vitamins like as (A, D, E, K).

iv) Calcium:

These are minerals which play role in bone repairness and strengness.

It provide structure and

Support to bones.

Calcium ingredients are necessary because it's deficiency lead towards few osteoporosis and rickets.

(17) Iron:

It is also minerals which supports to muscular part of the body like as teeth and bones.

It deficiency leads towards bone disorders.

(4)(D)

Remote Sensing:

Remote Sensing is a modern technology in which sensors are used to identify the specific information.

Remote sensor's work mostly in accuracy but sun light dependant. It carry the specific information from the light which falls on object.

An the nutshell, remote sensors

are used for risk assessment, urban management, solid waste management and other tasks.

① Remote sensor's in Environmental Purpose.

(i) Identify the temperature.

Sensors identifies the temperature firstly and climate condition.

(ii) Risk assessment.

It provide early information about natural disasters. So, it play important role in early warning method.

(iii) Solid waste management.

Solid materials which are the main source of pollution. it manage solid material that it could not emerged pollutant gases in atmosphere.

(iv) Specific installation for Safety.

Remote sensor's install safety project in harmful areas.

So, remote sensors play important role in disasters prevention.

(Q No 5)

Q. DMR: "DRM"

It is technology which is used to monitor, prevention, early assessment ^{hazards} in specific areas.

It is modern risk management method which handle the environmental issues and natural disasters.

Most importantly, it is used to protect the all living organism during disaster condition. Further, it warned through signals to community for future risk.

Usage and Importance of DRM

- (i) Early warning to coastal communities for coastal flooding and tsunami
- (ii) It is used ~~to~~ identify the glaciers melting and avalanches
- (iii) Specific projection installation are done by digital risk management system.

It is used to identify the climate condition and global warming in the earth's atmosphere.

Thus, digital risk management system is used to protect the living organism from natural hazards.

International organizations are emphasizing for digital risk assessment system in vulnerable areas.

(B) Bio-fuel

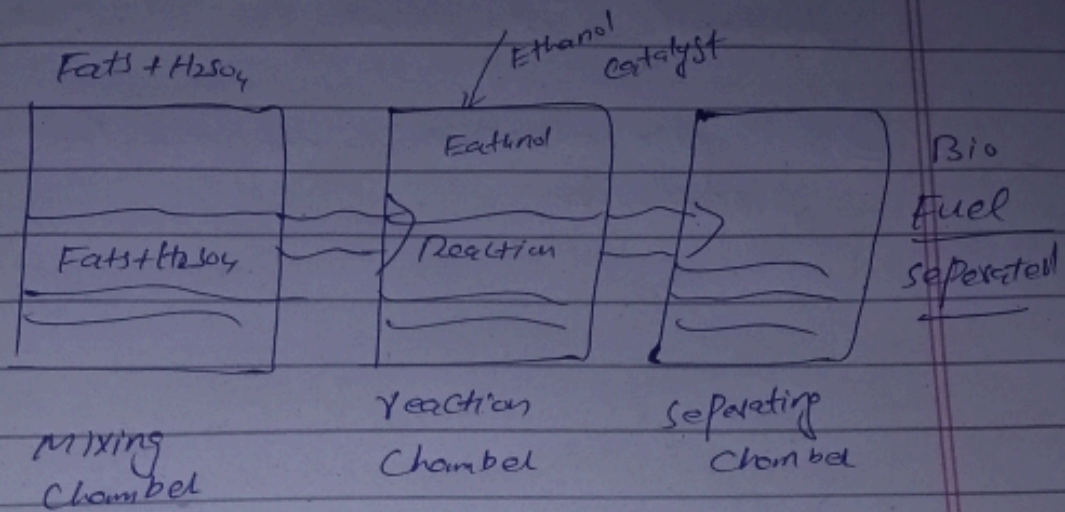
It is a fuel which is produced after few reactions in which bio-and fats along components are used rather than simple fuel raw materials.

An which ethanol is used as a catalyst

- i) "It is production of fuel by the waste of living organism"
- ii) animal waste are its source
- iii) It is renewable like fuel production.

Three chamber method

Bio fuel Production



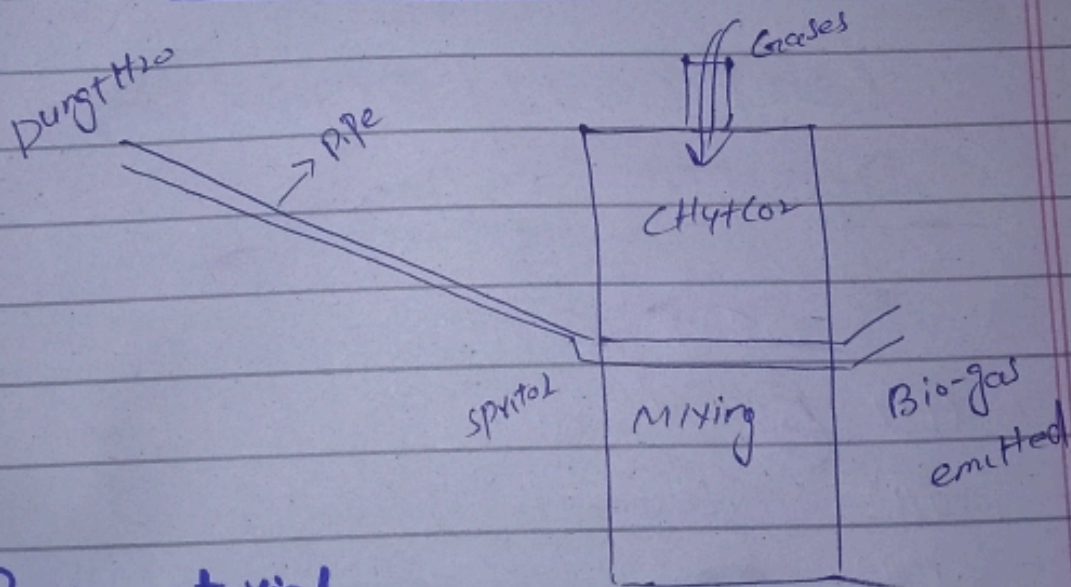
i) Raw material

Fats and H_2SO_4 are raw material

Catalyst
ethanol

ii) : Fuel is produced after three ~~cham~~ ^{Reaction} ~~bel~~

Bio- ~~Deisel~~ Gas Formation:



Raw material.

i) Dung + H_2O
 $CH_4 + CO_2$

ii) Both gas and fuel are produced

by using animal waste material.
Several way and different raw
materials are used for its Production

=> Both are effective, Cheap and less
Pollutants.

C) Digestive system:

Digestion:

The break down of food
from large components into small
components that it absorb in
the Stomach and Small intestine.

Components / Organs in Digestive system

- (i) Oral cavity
- (ii) Esophagus.
- (iii) Stomach
- (iv) Small intestine
- (v) large intestine.

All organs play role in
digestion of food

Stomach: Role

It is the third organ in digestive system in which food remain four to six hour.

It also digest the food but not complet digestion process.

Stomach only digest 1-2% of the food.

After few hours, Stomach push the food toward Small intestine.

There is not any gap between Stomach and Small intestine

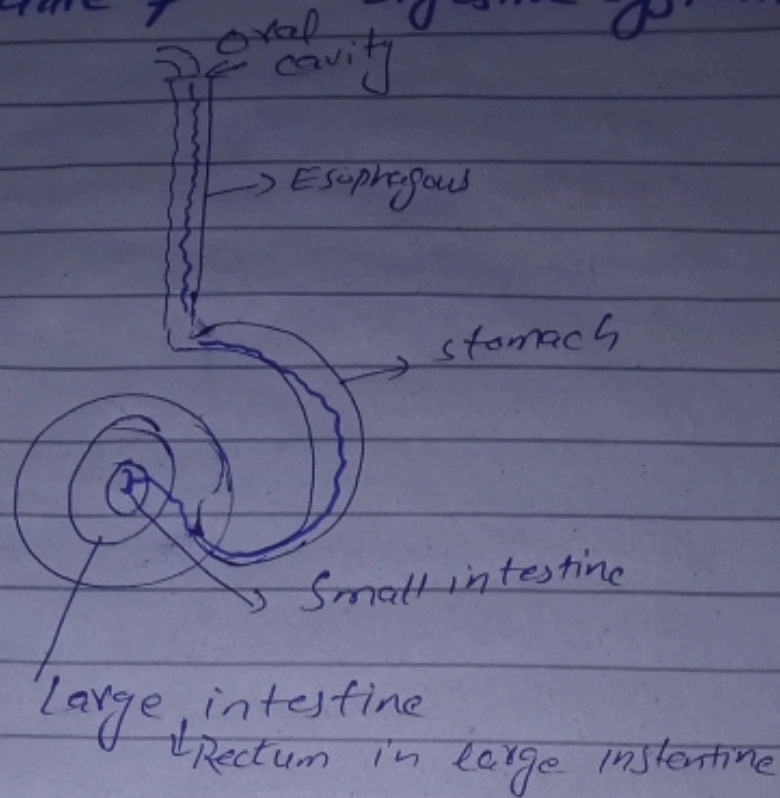
Small intestine

It is the organ in which 90 Percent digestion complete.

Major digestion process occur in this organ but only few minerals remain which digest in large intestine.

When food passes in small intestines, it's major digestion process^{is} completed.

Structure of Digestive system



(D) Plastics:

Defination

It is solid and organic material.

It is artificially producing material.

It is less hard and easily breakable material.

It is the composition of several solid components.

After heating, it losses its shape and emerged heavy toxic gases in the atmosphere

Applications:

It is used in household daily using materials like as spoons plates and glasses.

It is cheap in price.

Easily available in markets.

It is used as protection of expensive substances like as gold, silver and copper.

It raw materials easily available than industries more generate plastic substances.

Risk associated with plastic in environment.

i) Plastic is made of heavy artificial materials which are the main source of greenhouse gases in atmosphere

ii) After using, it emits harmful gases such as NO, SO₂ and CO₂ which pollute the atmosphere. These gases are the source of greenhouse effect and global warming

(iii) Further, these gases are source

of acid rain which is harmful
for all living organism on the
earth's surface.

It also disturbs the fertility of
the land

MATH Portion

QCB →

(A) DBAEC (A) House in middle

(B)

i) How many km from starting point?

1 km

ii) In which direction will be
running while finishing?

North

iii) After taking the second turn, Direction?
will you be running

South

iv) From finishing point -----?

West

(C) (A) Shirt (B) Coat (C) Solube

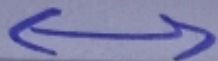
(4) Strik (5) Retewas

(D) 10 triangle

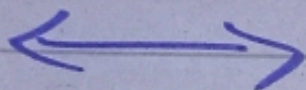
10 triangle will be made in
this shape

Q No 8

a) Women is the mother of
Ahlan.



b) The distance or area of a park
is 2:3 then 1.4 km is total
area of Park



(E)

$$144 = \frac{x+10}{2} \quad \text{Let } x =$$

$$200 = x + 10 \quad x = 200 - 10$$

$$\boxed{x = 270}$$

(F)

LCM of two number 40

Ratio 2:3 Sum

16:24

2:3

40 Sum