

Date: _____

Sun Mon Tue Wed Thu Fri Sat

Part - II

Qno 6 Part A

The woman is the mother of Ahsan because the ^{woman's} granddaughter is the daughter of her son whom Ahsan said 'my brother'. So the his brother's mother is also his mother.

Part - 2

Qno 7:

$$40\% \cdot x = \frac{2}{3} y$$

(i)

$$\frac{240}{5160} x = \frac{2}{3} y$$

$$\frac{2}{50} x = \frac{2}{3} y$$

$$\frac{x}{y} = \frac{100}{63} \cdot \frac{50}{3}$$
$$= \frac{50}{3}$$

(ii)

cost price of a ball = x

Total 17 ball selling price = 720 Rs

cost price 17 balls = $17x$

Loss = cost price = $5x$

() cost p of 5 ball = $5x$

$$5x = 17x - 720$$

$$12x = 720$$

$$= 60 \text{ Rs}$$

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Sun Mon Tue Wed Thu Fri Sat

Qj

$$M - 24 + S \quad \text{--- (I)}$$

After 2 years

$$M + 2 = S + 2$$

$$M + 2 = 2(S + 2) \quad \text{--- (II)}$$

$$24 + S + 2 = 2S + 4$$

$$26 + S = 2S + 4$$

$$S = 26 - 4$$

$$S = 22$$

D) R: 6 hour for 32 pages
K: 5h for 40

$$R = V = \frac{d}{t} = \frac{w}{t}$$

$$= \frac{32}{6} \Rightarrow \frac{16}{3}$$

$$K = \frac{40}{5} = 8$$

$$\text{combined speed} = \frac{16}{3} + 8$$

$$V = \frac{40}{3}$$

$$w = 110$$

$$V = 40/3$$

$$t = \frac{w}{V}$$

$$\Rightarrow \frac{110}{40/3}$$

$$= \frac{330}{40} \Rightarrow 8.25 \text{ hours}$$

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Sun Mon Tue Wed Thu Fri Sat

No 8

(i)

C A (B) D E
B has middle house

(ii)

A 1 km
B North
C west if I turn again to left
D or East if I turn right
E west

(D) There is 38 triangles

Section A

Disaster Risk Management DRM

DRM is any types of immediate response to any disasters like flood, earthquake or fire.

What is Risk Assessment in DRM

~~Early~~ Collecting Data: It involves patterns changing or any aberrance in normal ecosystem.

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Sun Mon Tue Wed Thu Fri Sat

2. Reporting

2. Considering Report: It includes the common people to respond and rep by reporting the disaster quickly when immediately after happening to authorities.

3. Releasing Early Warning:

Authorities have to publish or release realise the early warning to gather resources to provide emergency response.

Why Risk Assessment is Important in DRM:

Precautionary Measures: It provide ability to take early action to forestall the disastrous consequences of Risk.

To prevent from Damage: Early steps even before happening of calamity reduces the large infrastructure damage and human casualties.

To maintain normal ecosystem
It help to analyze change in trends and to sustain

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Date: _____

Sun Mon Tue Wed Thu Fri Sat

normal daily life

Conclusion:

Disaster Risk Management through Risk assessment reduce the fatal consequences of disaster. In Japan earthquake early warning system has ability to predict coming of Earthquake 20-25 minutes before which provide time to people to evacuate to Earthquake ~~savied~~ Halls. protected

(b)

Biofuels:

Biofuels are fuels come and produced from biomass like ^{bio}biological animal waste, plant waste, or organism

Types:

- 1- Bio-diesel
- 2- Bio gas
- 3- Bio-ethanol

Importance

- It is less expensive than normal fuels which non-renewable
- It produces less harm to environment by releasing

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Sun Mon Tue Wed Thu Fri Sat

less quantity of CO_2 , CH_4 etc.

Biodiesel

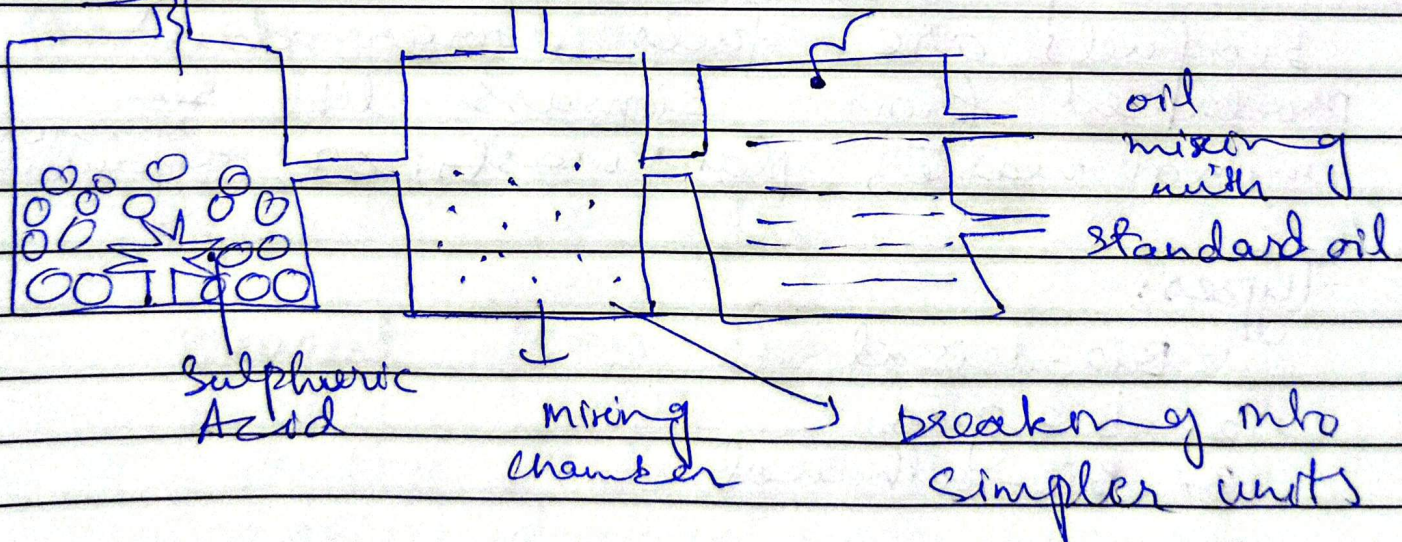
(i) Biodiesel:

It is the fuel which can be used as an alternative to normal & non-renewable fuel.

Production

- It can be produced by process called ~~bio~~ Trans-esterification
- It requires large amount of oil rich animal waste
- Required multichambered equipment
- Require Stand

Animal waste



- Gives Glycerol as by product
- less efficient
- increase the risk of deforestation

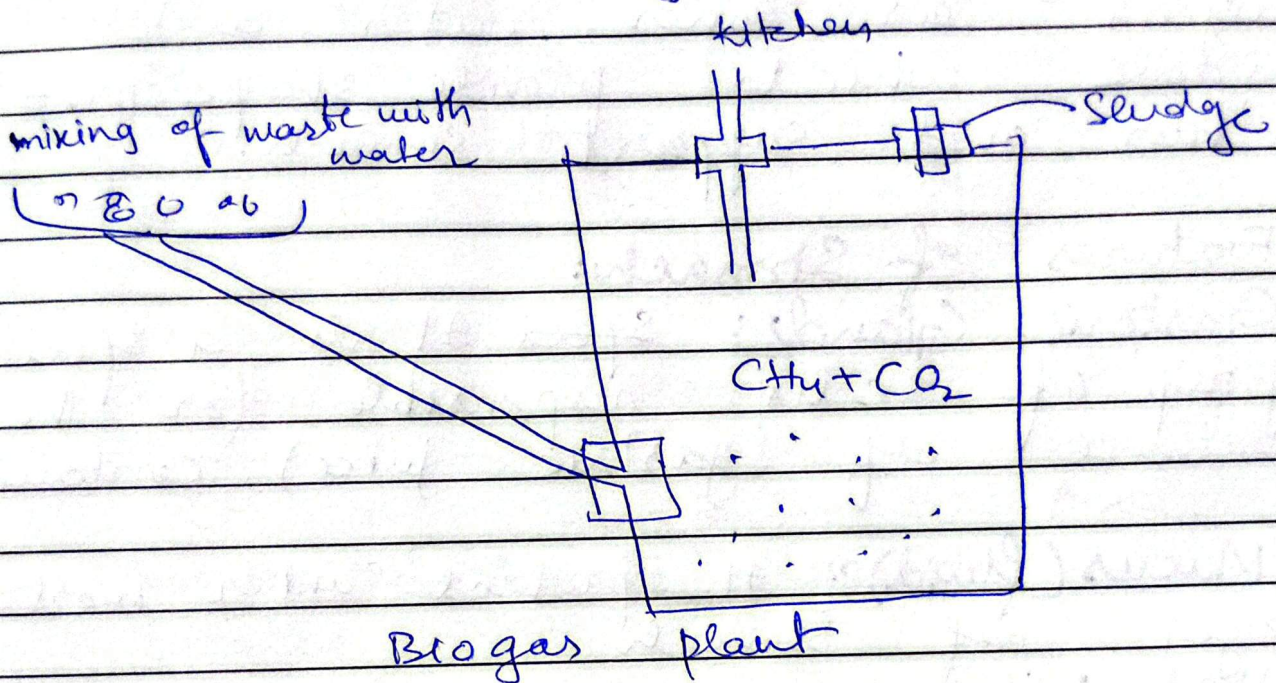
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Date: _____

Sun Mon Tue Wed Thu Fri Sat

Bio-Gas:

It can be produced from animal & plant waste used as alternative to common gas.



- It give sludge as bio product which is the very good fertilizer
- 70% of CH_4 & CO_2 of 30%.
- It is smelly gas
- has low pressure

(C) Digestive System:

Digestive is responsible for the breaking down of large particles of food into smaller more absorbable particles as

1. Carbohydrates
2. Proteins
3. Fatty Acids

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Date: _____

Sun Mon Tue Wed Thu Fri Sat

Stomach: is the J-shaped organ of the body responsible for 10% of digestion. It consists of 3 layers as inner, outer and middle which provide shape, protection and support stomach.

Features of Stomach:

Gastric Gland: Specifically it is a specialised group of cells responsible for the release of (gastric juice) contains:

- i) Mucus (fluid): It protects inner most layer of stomach.
- ii) HCl: It is responsible for killing of micro-organisms and convert pepsinogen into pepsin.
- iii) Pepsinogen: It is present in inactive form. HCl converts it into pepsin responsible for breaking down of protein into polypeptide.
- iv) Chyme: It is a semi-fluid like structure which is formed after grinding of food by stomach through forward and backward movement.

- Chyme then exits to small intestine by pyloric sphincter.

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Sun Mon Tue Wed Thu Fri Sat

Small Intestine: 90% of digestion occurs at small intestine. It is 6m long. It complete digestion.

Features / Working:

a. Duodenum

- ① 20-25cm in length,
- ② releases only enzyme Enterokinase
- ③ consist on

i) Pancreas

- Responsible to release pancreatic juice through pancreatic duct, consist on following enzymes like Amylase, Sodium Bicarbonate, Trypsin and Lipase.

(b) Liver: It releases bile which move through bile duct, responsible for conversion of fats into fatty acids.

(c) Jejunum: most of the digestion occurs here. It releases intestinal juice which contain enzymes

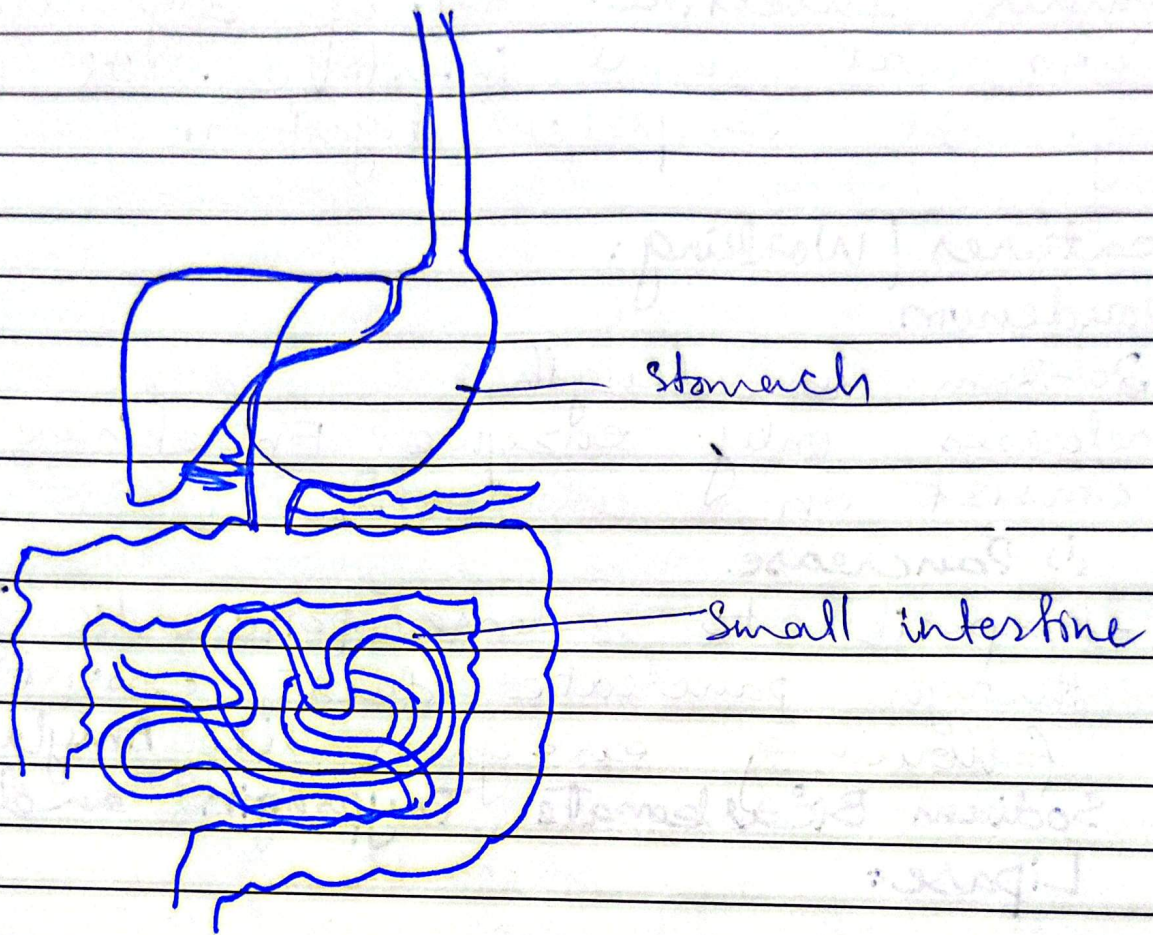
- Aminopeptidase: Polypeptide into dipeptide
- Trypsin: Convert dipeptide into Amino acids

- Lipase
- Maltase
- Lactase

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Date: _____

Sun Mon Tue Wed Thu Fri Sat



(Q3)

Global Warming

It is the average and gradual increase in ~~our~~ temperature of surface of Earth and lower troposphere.

According to NASA: 1°C temperature has risen in last century.

How GW can be reversed:

- Shifting to Renewable energy resources

We should cut our reliance

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Date: _____

~~on~~ green house gases like ~~CO₂~~
on non-renewable energy sources
which ~~also~~ releases green house
gases like CO₂, CH₄, SO₂ etc. We
should shift to renewable energy
~~resources~~ sources like hydel, solar,
wind, bio and ~~elect~~ geothermal energy.
and by promotion of SDG 7 which
ensure clean and affordable energy.

Promotion of Global Forestry:

- Promotion of Afforestation and reforestation
- Degrading deforestation
- It provide 'Carbon sink'
- Provision of SDG 15 life on land and forestry.

Promotion of Sustainable of Urbanization / Sponge cities:

- Promotion of 'vertical expansion' rather 'horizontal' as Japan did despite excessive earthquakes
- use of "porous bricks" to allow water to absorb by low soil to support rain cycle
- Adoption of Japanese 'Miyawaki' technique to grow small patches of forests

Date: _____

Sun Mon Tue Wed Thu Fri Sat

4. Promotion of sustainable Transport:

- Reducing the usage of private car usage
- Encouraging public transport, use cycles and 70% of people in Copenhagen travel by cycle
- Shifting of public transport to electric vehicles like govt's initiative of Blue Electric buses in Islamabad and e-scooters.

5. Promotion of Education & Awareness:

- Integrating institutions like schools universities to educate people about global warming
- Cooperating with religious figures to talk on global warming as 'Jumma Khulba' is good platform
- Use of digital media to construct people narratives for collective against global warming
- This all help at social level.

6. Others Efforts:

- Ensuring Solid waste management
- Getting International support through finances for capacity building
- Sustainable Industrialization
- ~~Strengthening~~ Strengthening
- Strengthening Disaster Risk management

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