

Q No 1

(a)

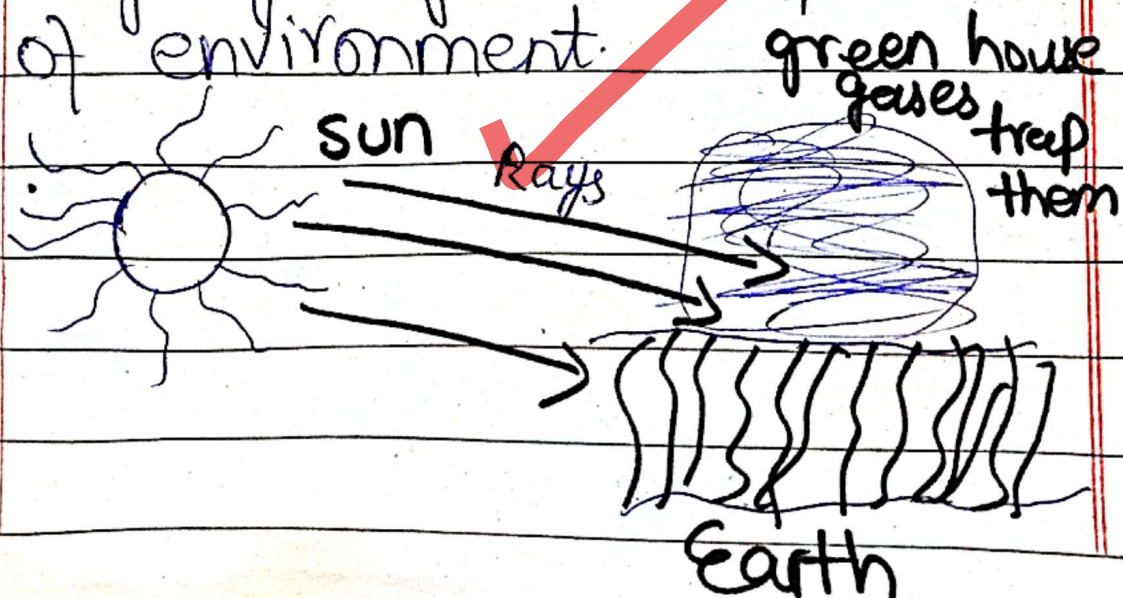
Green house effect (GHE)

Green house is basically a phenomena in which harmful ultraviolet and infrared rays are sun are not allowed to leave earth surface.

Gases of Green house effect

- * Carbon dioxide (CO_2)
- * Methane (CH_4)
- * Nitrogen oxides (NO)

These gases are increasing day by day due to pollution of environment.



How green house effect is related to global warming:
Global warming stands for rising temperature of earth. So basically green house gases trap sun rays and do not let them to leave earth. Due to heat temperature of earth increases day by day.

*IPPC →

Global temperature has increased by 1.2°C

↓ Due to

Green house effect (GHE)

(b)

vitamins: These are compounds or components which are required by human body for normal development and functioning.

Types

Fat soluble vitamins

* Vitamin A, D, E, K

* Can be stored in body

* Do not require daily.

Water soluble vitamins

* Vitamin B complex
B₁, B₂, B₃, B₅, B₆, B₇, B₉, B₁₂

* Cannot be stored in the body

* Body requires them daily.

Sources and Deficiency disorders

Vitamins	Sources	Deficiency disorders
Vitamin A (retinol)	carrots	Night blindness
Vitamin K	green vegetables	Bleeding disorders
Vitamin D	Dairy, eggs	Rickets
Vitamin C	Oranges	Scurvy
Vitamin B ₁	Meat, organs	Beriberi (muscle contraction)

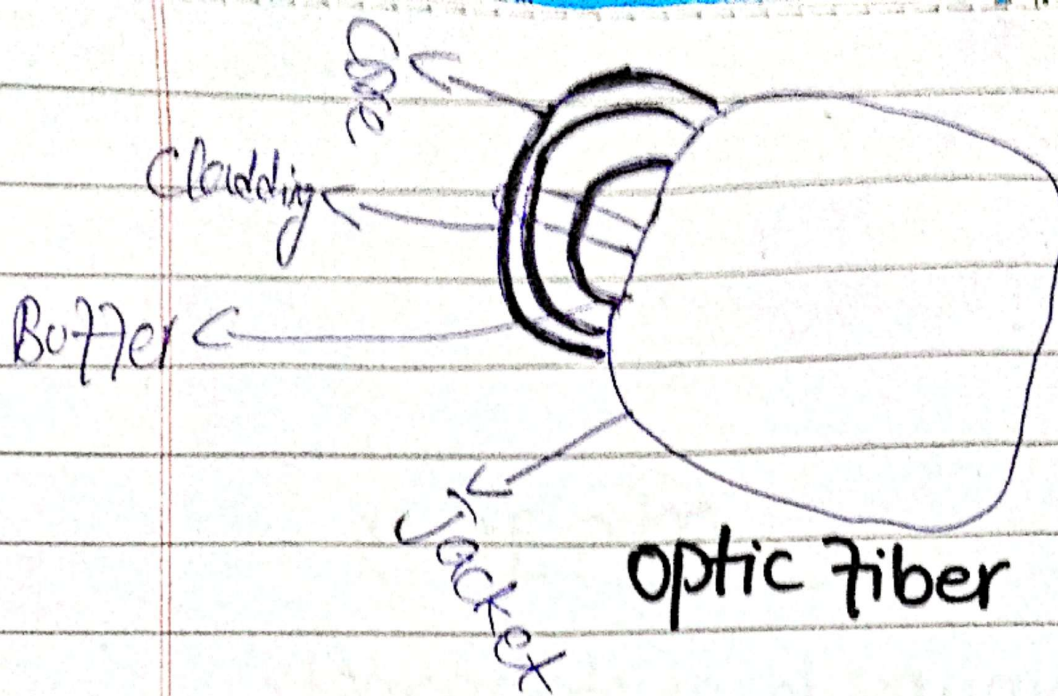
vitamin	source	Deficiency disorder
vitamin B2	milk, dairy	skin and eyes irritation
vitamin B3	Liver, meats	Pellagra ↓ Dermatitis ↓ Dermatitis
vitamin B9	vegetables, meat	Anemia
vitamin B12	fish oil, meat	Anemia

(c)

Optic fibers: optic fiber refers to framework or technology for transmission with a specific hollow medium.

parts of optic fibers

- Core
- cladding
- Buffer
- Jacket



Importance of optic fibers

- ① High bandwidth: It has greater band width as compared to any other metal fibers so can transmit information over large distances
- ② No power losses: optic fibers do not cause power losses. Telecommunication companies use them mostly.

③ Immune to electromagnetic interference. optic fibers are not affected by any electromagnetic issue rather copper wires are affected.

④ Efficient structure: They are made up of dielectric material. so there is no risk of electric shock.

⑤ Cheap: optic fibers are cheaper than copper wires and easily accessible in market.

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(d)

water pollution: It is process in which any biological, physical or chemical agent alters or modify characteristic of water.

Types

Marine: Due to marine pollution many fishes die due to contamination of water.

Rivers and lakes water pollution: Rivers and lakes become polluted and many aquatic animals die due to suffocation.

Ground water pollution: Pollutants directly leach into

ground water.

Sources

Industries: Industries release unfiltered waste which contain chromium, lead and mercury which directly leach into water bodies.

Agricultural practices: Herbicides, fertilizers and pesticides can seep into water specially ground water.

Household waste: garbage and some wasted products and elements get mix with rain water and contaminate water bodies.

Controlling measures

- Use catalytic converters and filters in industries
- Use biofertilizers in agriculture

- proper household disposal should be ensured.

④ No 3

(a) effects of global warming on Pakistan

① glaciers melting: glaciers are melting every year.

Example: Hindukush and Hindayan glaciers are melting.

② erratic rain patterns: Heavy rain falls occur in Pakistan
→ In Chakwal heavy rain fall occurred in 2025.

③ Floods: Floods are horrible outcome of global warming.
→ During 2022 floods according to world bank Pakistan lost 30 bn\$.

④ Heatwaves: global warming causes heat waves and deaths
→ Jacobabad has faced severe heat waves in 2022.

Suggestions

- Pakistan should introduce carbon tax to reduce gases emissions.
- Renewable energy sources such as solar and hydel should be promoted.
- Early warning systems should be installed in the country.
- Pakistan should discourage urbanization.
- Energy efficient appliances should be used.
- Use public transport instead of carpool.

(b)

Importance of balance diet

- Balanced diet is defined as sufficient amount of proteins, lipids, carbohydrates, vitamins and minerals taken by body for optimum function and development.

Importance:

proteins: They are important for building mass mass.

Lipids: They in form of fat protect vital organs such as kidneys.

Carbohydrates: They provide energy to body in the form of glucose.

Vitamins: They regulate essential processes of body such as growth and fertilization.

Minerals: They are important for development: such as development of tooth and central nervous system.

Disorders

- * If more fat (LDL) in body then $\rightarrow$ Atherosclerosis occur
- * Excess glucose level lead to $\rightarrow$ Diabetes
- * Deficiency of iron leads to $\rightarrow$ Anemia
- * Deficiency of vitamin C leads to $\rightarrow$ Scurvy
- * Deficiency of vitamin D leads to $\rightarrow$ Rickets

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(C)

Strata: It refers to distinct layers of atmosphere.

→ It consists of

Troposphere: It extends 8-15 km. All weather phenomenon occurs here (rain, storms, cloud) here.

→ **Stratosphere:** It is above 50 km. Ozone layer is present here. aircrafts can fly here.

→ **Mesosphere:** It extends between 50-85 km. Meteors burn here. Temperature decreases with altitude.

→ **Thermosphere:** It is present between 85-600 km. radio communication occurs here. Auroras occur here.

Functions of Atmosphere

• It makes our breathable: Due to oxygen present in air man can breathe.

• Atmosphere supports life on earth: It allows sun rays to reach ~~the~~ earth makes life possible.

• Atmosphere as a source of communication: sound waves can travel through air and can be transmitted.

• Atmosphere and temperature: It regulates temperature of earth. On a hot day water vapours combine with air and cause rainfall.

• protection of earth: Atmosphere protects earth by filtering ultraviolet radiations

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(d)

SWM: It stands for solid waste management. It is basically management of garbage, household waste, hospital waste and industrial waste products.

Available Disposal Methods

Landfills

- **Openly dumps:** Solid waste are openly buried in ground away from cities. These type cause pollution.

Incineration

- **Dumping stations:** In this method all wastes are brought to stations and they are burnt.

Safe disposal

- **Separation of waste products:**

In this type hospital waste is kept separate because it requires special dumping.

- **Anaerobic Digestion:** Decompose organic waste without oxygen to produce biogas.

- **Recycling:** plastic, glass and papers from waste can be recycled.

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