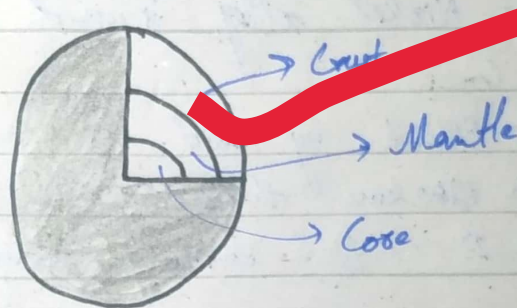


Q<sub>2</sub> (a)

Explain the internal structure of Earth.

### \* Internal Structure of Earth:

The internal structure of earth are divided into three layers; Crust, Mantle and Core.



#### \* Crust

↳ It is mainly composed of alumino-silicates and its thickness is about 40-70 km. The temperature may vary in the deepest part of earth crust is about 870°C.

#### \* Mantle:

↳ It is composed of ferro-magnetic silicates and it's about 290 km deep. Temperature and pressure increase with depth. Further, mantle is also divided into 02 layers; upper and lower.

#### \* Core:

↳ It is the inner most part of earth's layer and its temperature is 6000°C as hot as sun surface. The pressure is about 2 million.

times of the earth's atmosphere at sea level. Further, core is divided into two parts; Outer core and inner core.

① Outer Core:

- ↳ Filled by liquid
- ↳ 2300 km thick
- ↳ Nickel-Iron alloy is used in composition

② Inner Core:

- ↳ Filled by solid
- ↳ 1200 km thick
- ↳ It is entirely composed of Iron.

Q No 2(b)

What are the vaccines? Give its types, advantages and disadvantages.

\* Vaccines — Resistance for diseases.

Vaccines is the method of stimulating resistance in the human body to specific disease-causing microorganisms such as bacteria and viruses.

\* Types of Vaccines

① Attenuated Vaccines:

In this method of

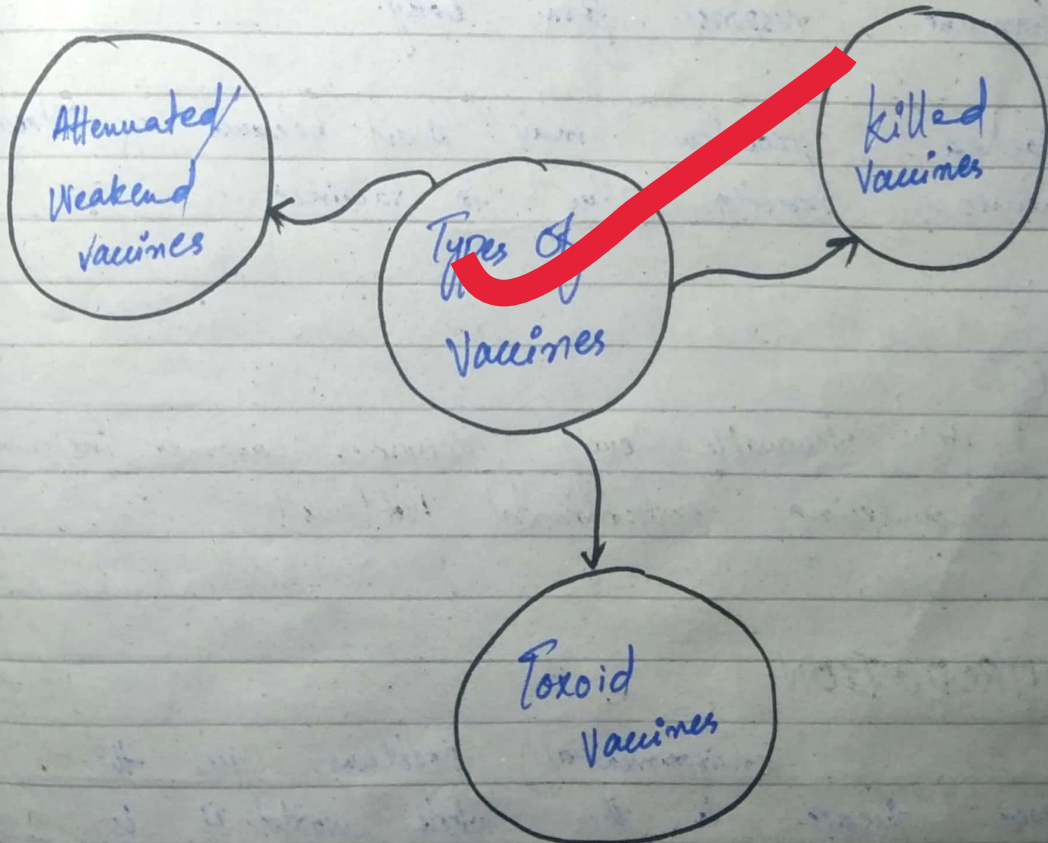
Vaccines, active viruses are used for making vaccines. It is also called weakened vaccines.

② Killed Vaccines:

In this type of vaccines, bacteria are used for making these vaccines. For example, Inactive virus.

③ Toxoid Vaccines:

It contain an inactivated toxin produced by bacterium for making these type of vaccines.



## \* Advantages of Vaccines

- (i) Create strong immune system for protection of body from diseases.
- (ii) killed or weakened viruses.
- (iii) It helps to maintain 90-100% immunity.

## \* Disadvantages of Vaccines.

- (i) Allergic reaction from injection
- (ii) large dose are required to generate strong immune response from body.
- (iii) Diarrhea problem may start because of internal chemical reaction due to vaccines.

Q No 2 (c)

How renewable energy resources can be instrumental in countering environmental problems?

## INTRODUCTION:

Environmental problems are the biggest threats to the whole world. It is mostly caused by the use of non-renewable

energy because when fossil fuels ~~are~~ create harmful greenhouse gases ~~and~~ our planet already feeling the impact of climate change. By using renewable energy ~~we~~ would significantly decrease the environmental problems.

\* Non Renewable Energy ~ Cause of Environmental Problems:

Due to large use of non-renewable energy is the industries the emission of green house gases, Carbon-di-oxides and other toxic gases ~~creates~~ very harmful and dangerous environmental problems. These problem may affected ~~socially~~ and economically in terms of floods, acid rains and melting of glaciers etc

\* Renewable Energy ~ Instrumental for countering environmental problems:

By using renewable instead of fossil fuels we would significantly decrease the current levels of greenhouse gases emissions, ~~and~~ this would have positive impact ~~for~~ our planet.

\* Possible ways to replace non-renewable to renewable energy.

- 1- Use of wind power for producing electricity.
- 2- Use of hydro power for producing power.
- 3- Use of Biomass and Biofuels for industries.

Short answer. Add more arguments in this part

\* Conclusion:

In a nutshell, renewable energy can overcome the environmental problems as it is not emits the gases which are harmful for environment.

Q no 2(d)

Explain the phenomenon of tsunami. Give examples?

\* Tsunami:-

It is a series of waves caused by a rapid displacement of a body of water (ocean, lake). It is mostly caused due to the amount of earthquake and volcanic activity in the area.

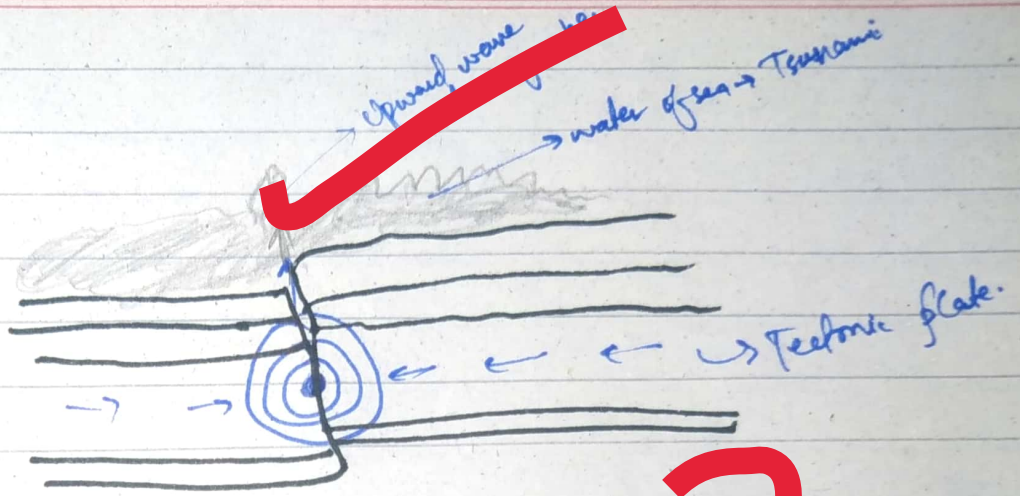
\* Phenomenon of Tsunami:

It arises from the sudden displacement of gigantic water masses due to earthquakes on the sea bed, volcanic eruption above and under water, landslides.

There are three things that cause Tsunami easily.

- 1- Earthquake nearby for higher intensity rapidly enough water
- 2- Sea bed must be lifted by earthquake
- 3- The epicentre of earthquake near to the coastal line.

Discuss this in more detail by giving subheadings



(a)