

Date: 19/12/24

Mock-6 for CSS 2025

Day: Thurs

General knowledge-I
General Science and Ability:

PART-II

Section-I

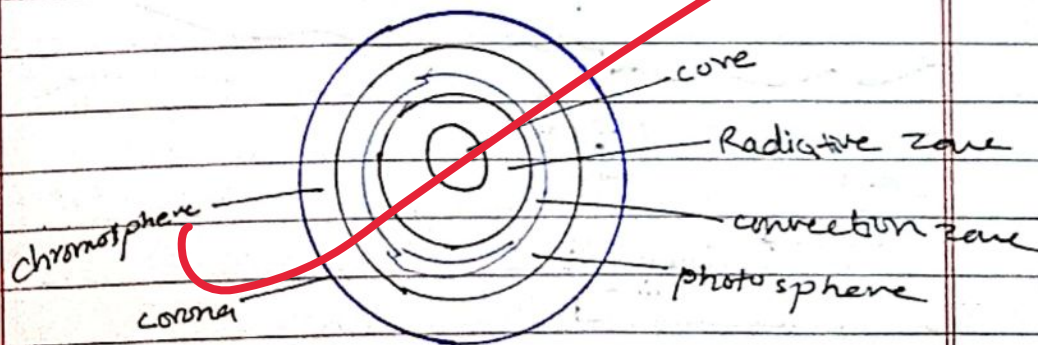
Q3

a) Explain and draw the structure of Sun?

The Sun is a type of a star, with one of the 100 billion in our galaxy, in the Milky way. The Sun play an important role in our daily lives such as, it drives weather, ocean currents, seasons, and climate, and it makes plant life possible through a process known as photosynthesis. If Sun does not exist then the world don't exist.

The Sun is made up of blazing combination of gases. These gases known as plasma. The Sun also create nuclear fusion by hydrogen which is fusing together to create helium.

The Sun also contains other chemical & metal like sulfur, iron, magnesium and carbon.



3 (b) Tsunami:

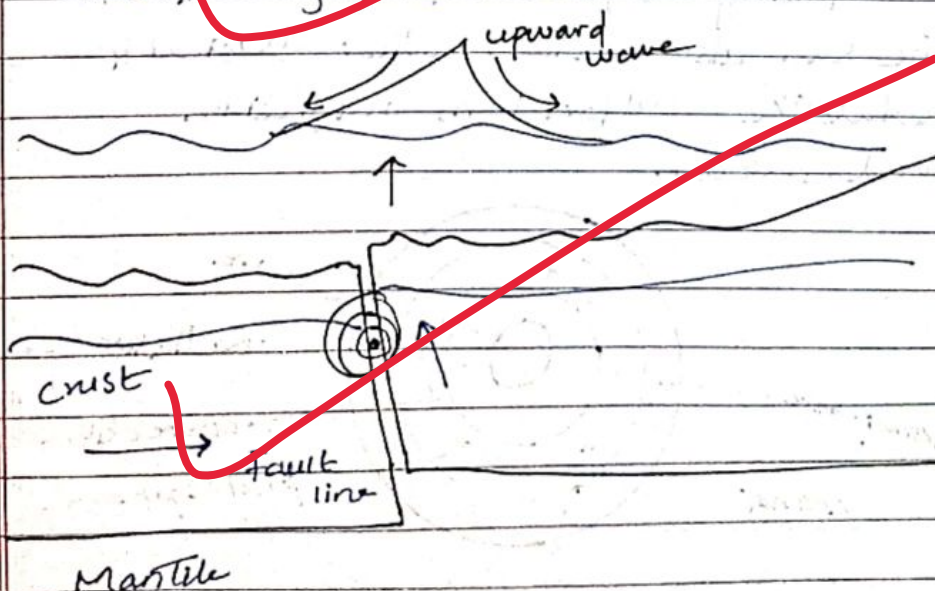
Tsunami is a series of ocean waves that sends surges of water, and sometimes its height reaches over 100 feet into land. These heavy walls of water create a massive land destruction in any where.

How it generated:

The Tsunami is generally generated by under sea earthquakes at tectonic plate boundaries. When the the ocean surface or floor at a plate place boundary rises or suddenly falls, then it create heavy waves of sea water and become Tsunami.

Example:

The recent example of Tsunami is 2 year before Japan had an tsunami attack, in Hyuganada Sea.



3(c) Environmental pollution.

Environmental pollution, is the introduction of harmful materials into earth environments.

These harmful materials are called pollutants.

The pollutants can be natural and human made. Natural made can be volcanic ash and human made can be factories waste.

There are many types of pollution which are follow

Land pollution

pollution which are lay on land. That caused due to biggest amount of garbage, factories waste and mining waste.

Air pollution

Air pollution, which is common these days. includes mixtures of solid particles and gases in air caused by gaseous pollutants.

water pollution

The water pollution, contains organic waste, chemical pollutants affecting lake life & land life.

Soil pollution

Soil pollution, includes Herbicides, pesticides and other chemical waste which mostly done by human activities.

Harmful effects:

The pollution can cause the climate imbalance, like Drought; problems like fog or smog; volcanic eruption; no rains; increase in green house gases which is known as global warming; human health like decreasing the age limit by 4-5 years; eye problem; cancer problem so on and so forth.

Measures to curb it:-

The people and government are making efforts to fight pollution. Recycling is becoming more common; renewable energy is more common; garbage management; cleaning blue water by biggest tents in sea; Kyoto protocol is an international agreement to combat the emission of green house gases. These are some measures which are being taken place.



3(d) What is wireless communication..

The wireless communication means, the transmission of information between two or more devices without using a proper wire system or cable. It doesn't contain wire. It mostly uses the electromagnetic radiations or waves to transfer the information or data. Such as voice, text, pictures. More the satellite to help in radio active or wireless communication.

Satellite:-

Satellite is a system which transfers data or information from one place to another using a communication satellite in the orbit around the earth. like TV, internet and telephone.

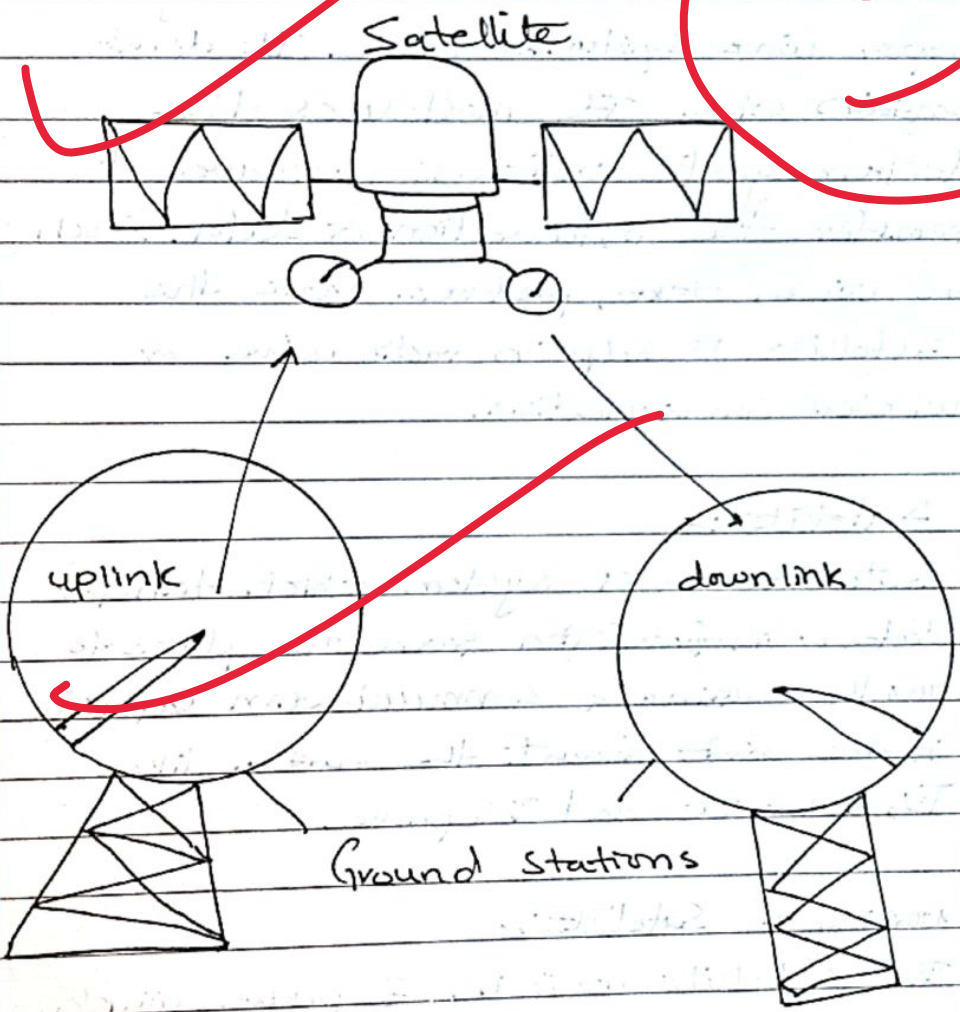
Working of Satellite:-

The satellite works in 3 phases which are follow:

- uplink
- Transponders
- Downlink

These are phases in which satellite is works. For example:- A start is phone when it open internet browser, it phone give signals (uplink) it to satellite, then in second phase, it transponders it and connect the signals

Then in 3rd stage it transport the data to the phone known as (downlink) in this way it works.

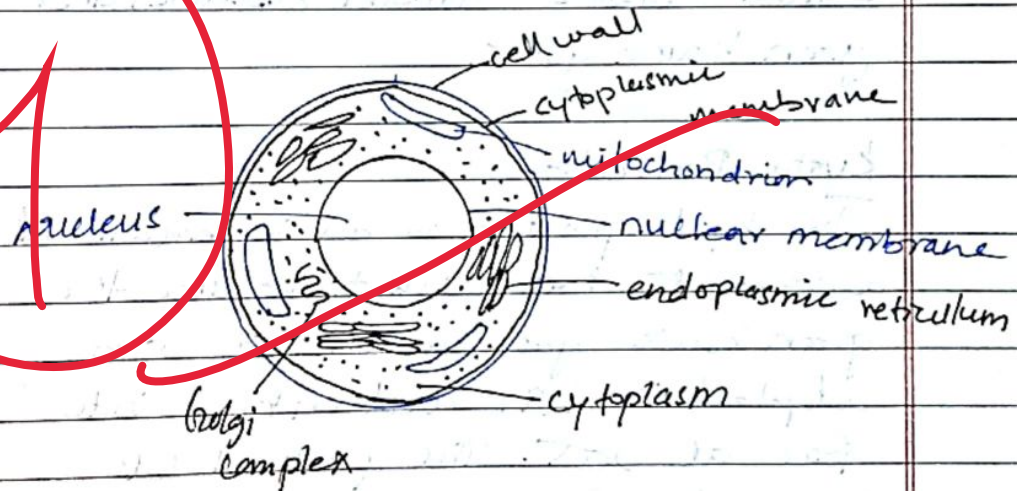


Q 5

a) Differentiate between a eukaryotic and a prokaryotic cell:

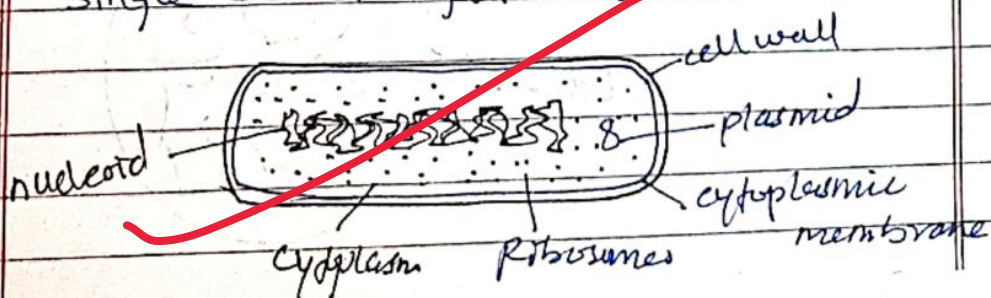
Eukaryotic cell:

The Eukaryotic cell are usually larger cells and more complex cells. They have a true nucleus and a proper membrane-bound organelles. They are found in animals plants and fungi.



Prokaryotic cell:

The prokaryotic cell are much simpler, smaller and having a lack of a true nucleus and membrane-bound organelles. These types of cells are found in single celled organisms like bacteria.



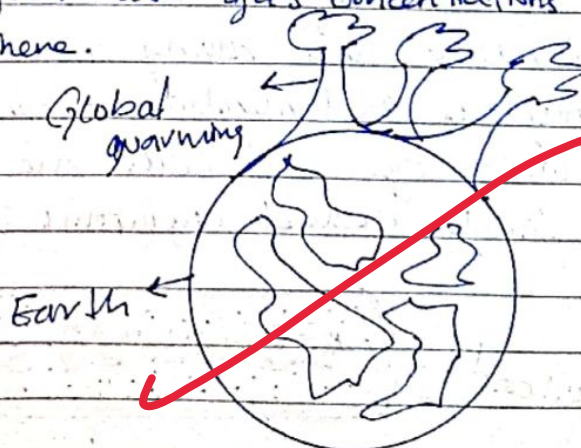
5(b) what is global warming? what is Kyoto protocol?

Global warming:

Global warming is increase in the average temperature of the atmosphere, oceans, and land masses of earth. This rapid warming, which most scientists believe is result of human activities like coal, oil and natural gases, which causes carbon dioxide, and green house gases.

Kyoto Protocol:-

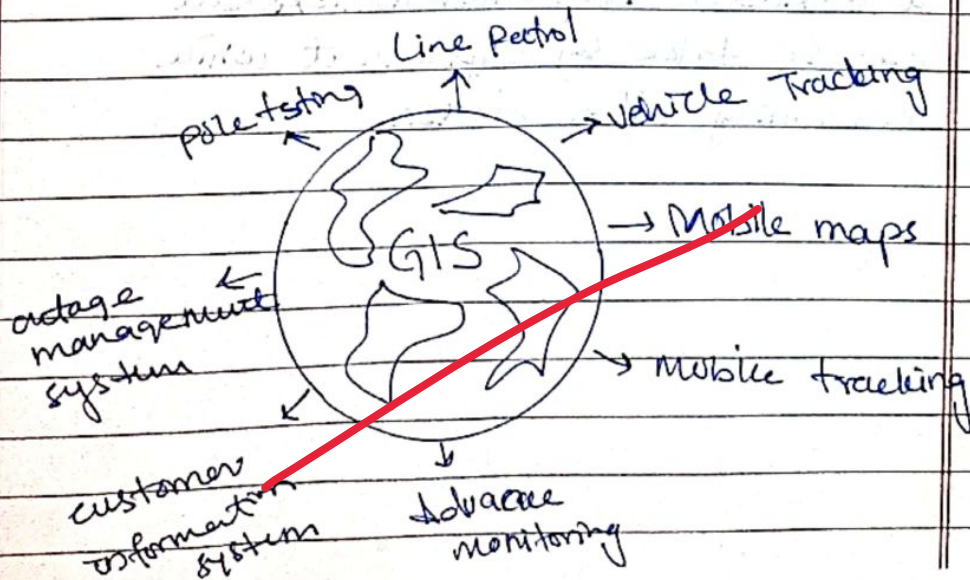
The Kyoto protocol is an international agreement that aims to reduce the green house gas emission. It was adopted in 1997 and entered into force at 2005. The protocol sets the goals for reducing emissions by an average of 5.1% below 1990^{levels} over the time period of 2008-12. The goal is to stabilize greenhouse gas concentrations in the atmosphere.



5(c) GIS :-

A Geographic information system (GIS) is a computer based system that analysis and displays thing geographically referenced information. It help to identify the location. GIS gives information on map, like streets, building and other location. The GIS can help in the information management system for agriculture, health, education, land, environment, Disaster, Tourism and so forth.

The GIS technology people can compare the location of different things in order to discover how they are related. For example, using GIS in a single map could includes sites that produces pollution, like factories or areas like wetland and rivers. There is no limit to the kind of information that can be analyzed using GIS Technology.



5(d) Antioxidants:

Antioxidants are the molecules that can help your body to fight off the harmful free radicals, which are linked to your health conditions like diabetes, sugar and cancer. They are found in food like vitamins E and C. The free radicals are highly unstable molecules (or atoms) with an odd number of electrons.

Antioxidants repairs or clean the damaged cells, and some antioxidants defense enzymes as well.

Antioxidants are essential for the survival of all living things, including animal and plants. In humans, the body produce some antioxidant it-self to protect itself from different disease due to tissue injury.

Antioxidants are important for our health. The body produce certain antioxidant but other antioxidant can be take by supplement while concerning the doctor.

Explain complex concepts in simple terms.

Use real-life examples.

Include diagrams and flowcharts for competitive edge.

Discuss practical applications of scientific concepts..

Use diagrams and graphs