

—(Question #2)—

a. Difference Between Plant Cell and Animal Cell.

Cell is the basic unit of every life. It is further classified into animal cell and plant cell. Following is the difference between both:

Table Illustrating the Differences:

Plant Cell	Animal Cell
* Definition	
Plant cells are the cells that are present in plants only.	Animal Cells are the cells that are present in humans and animals.
* Composition	
Plant cell contains chloroplast, central vacuole, cell wall and a slightly tilted nucleus.	Animal cell contains → cell membrane → endoplasmic reticulum etc
* Food Storage and making	
Plant cells make their food through photosynthesis and is stored in vacuole	Animal cells are dependent on outside source food.

* Prime Difference

Plant cells have

- cell wall
- chloroplast
- large size vacuole
- nucleus is slightly tilted

Animals cells

- lack cell wall
- chloroplast
- rare vacuole/ small in size
- nucleus is not tilted.

* Prime difference in functions

- Cell wall provide turgidity and security

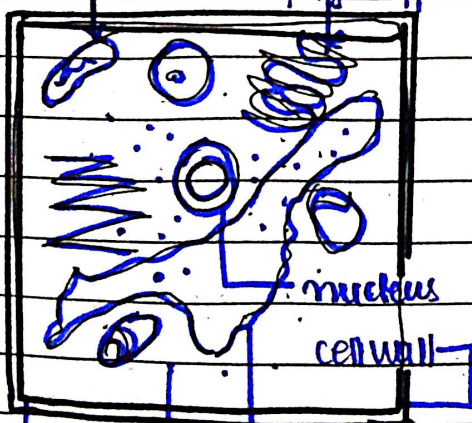
- cell membrane provide security

- Vacuole responsible for elimination of waste

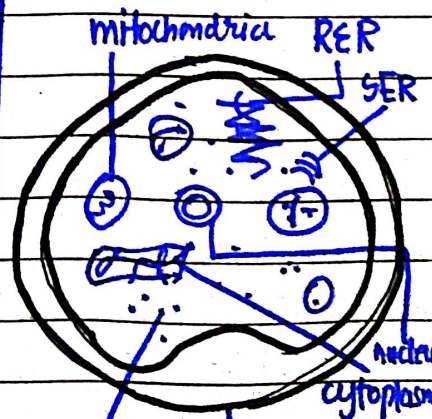
- lysosome responsible for waste removal

Visual Representing the Differences:

Mitochondria Golgi Apparatus



Plant Cell



Animal Cell

b. Formation Of Urine In the Human Body:

The prime organ responsible for urine is kidney. Further, the structural part of excretion system Nephrons is responsible for urine formation.

Urine Formation:

Following is the three step method of urine formation:

1. Glomerulus Filtration In Bowman Capsule of Kidney:

Blood comes from renal artery containing the toxic waste with it.

Bowman capsule then filtrate that blood and moves it towards the next step. Result of first step thus:

— Toxic Waste Filtrated From Blood —

2. Selective Reabsorption of Essential Substances:

the blood is then move for selective reabsorption, where glucose and amino acids are reabsorbed.

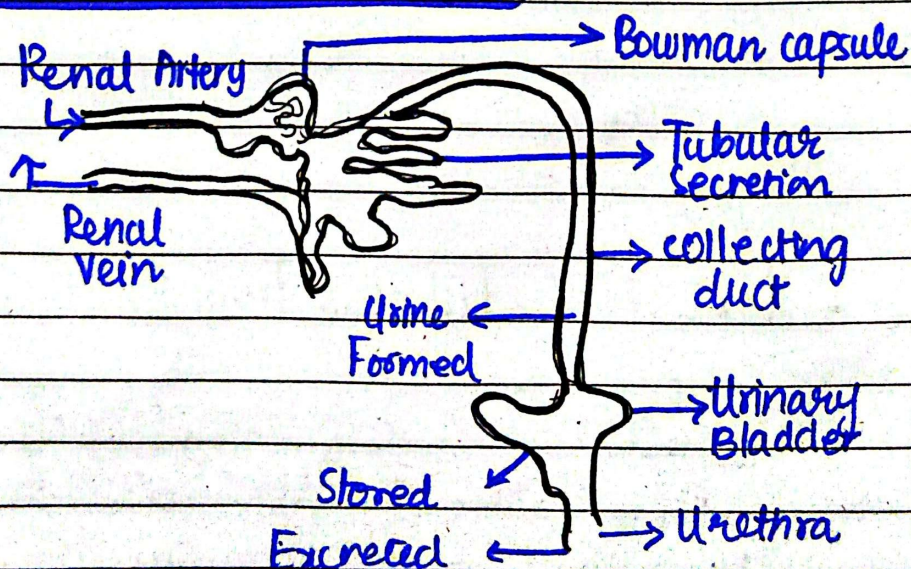
—Returned and then further removal of toxic waste—

3. Tubular Secretion In collecting Duct Of Excretion System:

the collected waste is secreted from collecting duct and the formed waste (fluid) is secreted towards Urethra.

—Fluid formed → Ready For Urethra → Moving to Urinary Bladder and Excreted from Urethra—

Visual Representation Of Urine Formation:



c. Disaster Risk Management And Its Weaknesses In Pakistan.

Disaster Risk Management:

Disaster
can be easily defined as following.

$$\text{Disaster} = \frac{\text{Hazard} + \text{Vulnerability}}{\text{Capacity}}$$

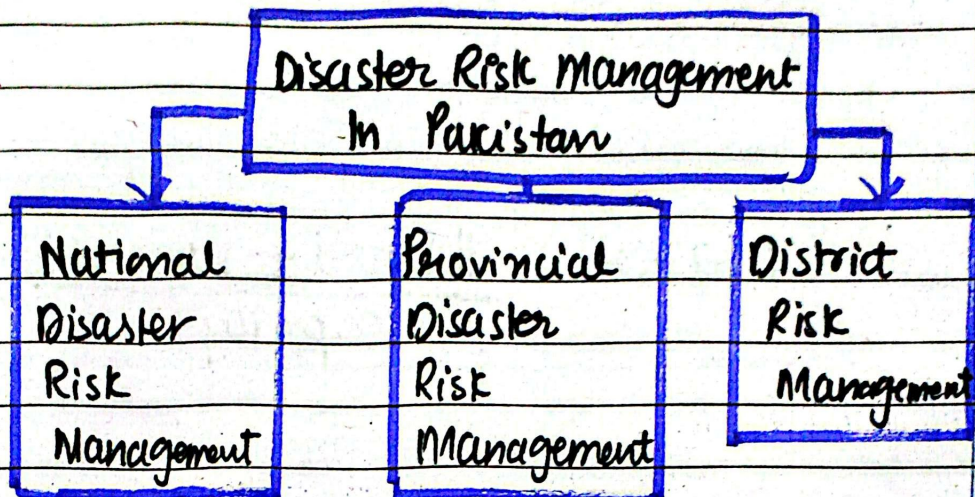
However, disaster Risk management (DRM) can be defined as the following:

— Disaster which means a sudden event that has the potential to disrupts human (normal) functioning. The effective, timely and pragmatic approach towards the management of that sudden event is known as Disaster Risk Management. —

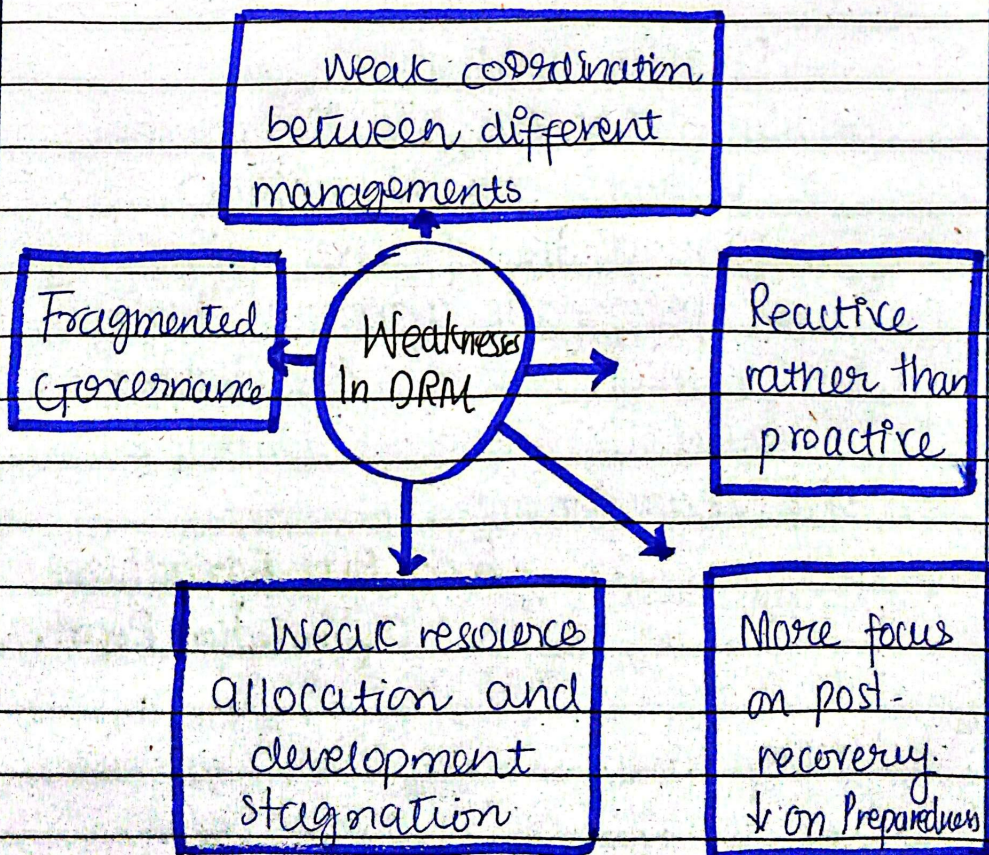
- Food And Agricultural Organization Report.

Also, DRM requires different approach everytime due to numerous and different types of disasters, their impacts. It also include 4-steps: Preparedness, response, recovery, mitigation.

Disaster Risk Management and Its Weaknesses In Pakistan:



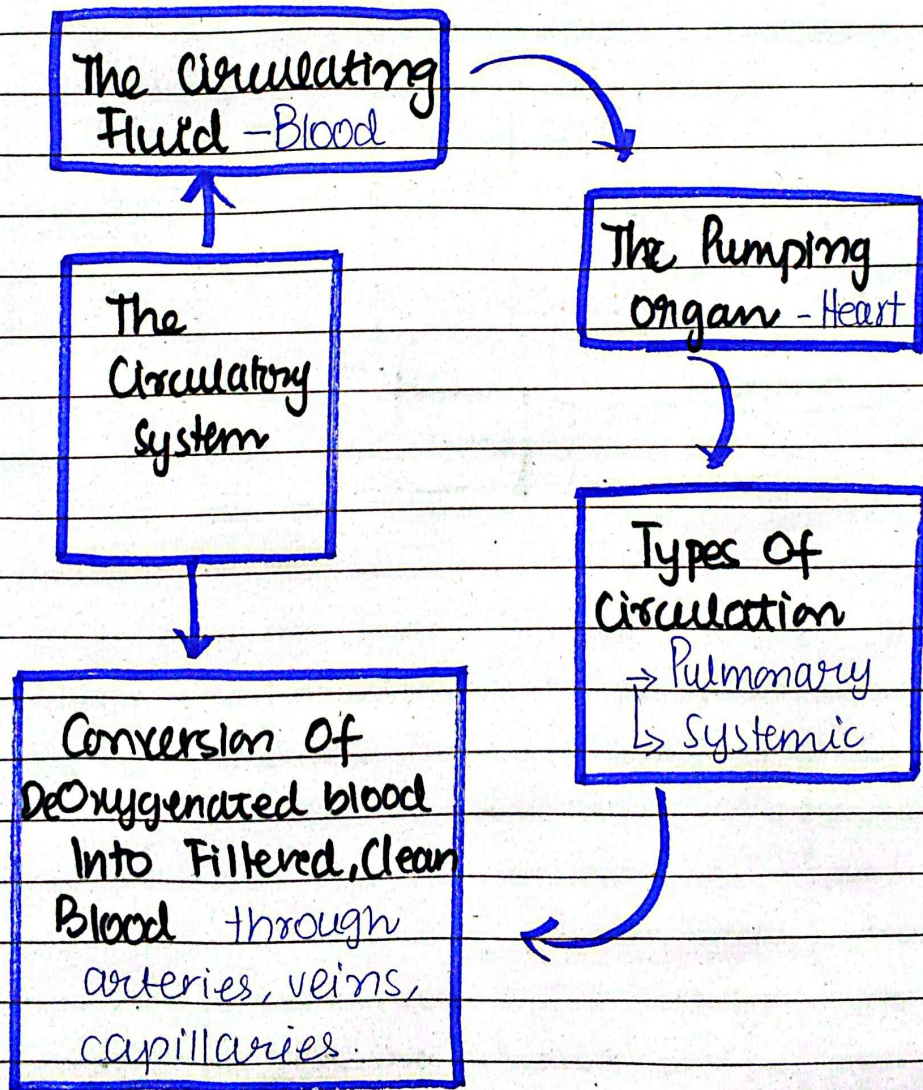
-Weaknesses:



—(Question 1)—

a. Circulatory System - Working of a Human Heart:

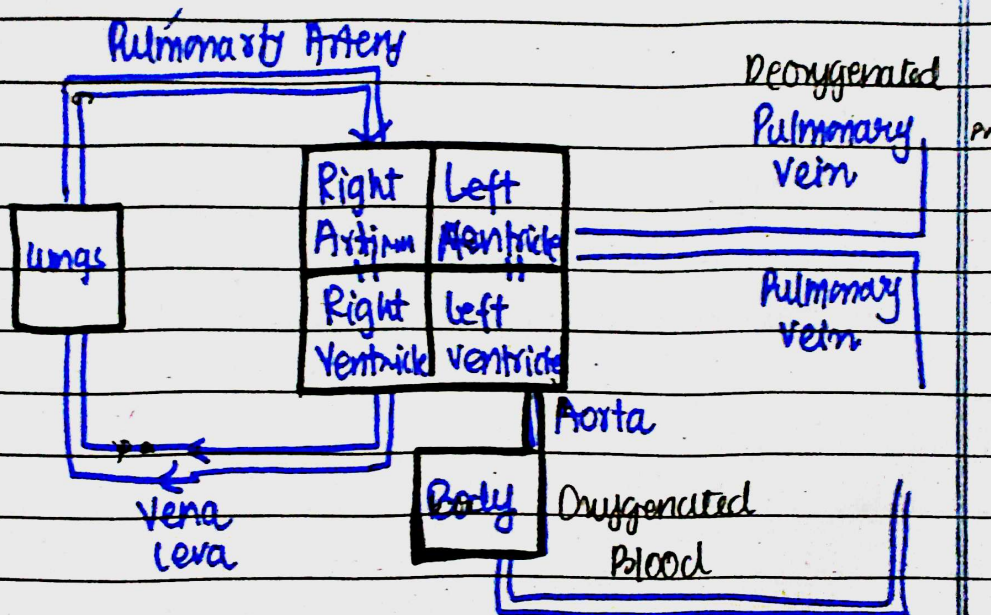
Circulatory system is the most crucial life process in a human body. It is responsible for circulation of blood throughout the body smoothly.



—The Circulatory System—

The Working Of a Human Heart:

Heart is an important organ located at chest activity slightly tilted towards left lung. As big as a human fist. Following is the working mechanism of a human heart:



Pulmonary Vein takes blood to the heart in left Atrium and then send it to left Ventricle

Through Aorta blood is transferred to body organs

Blood is Received through Vena Cava and lungs Filtrate It. The blood is received from right ventricle.



Through Pulmonary artery blood is transferred from lungs to heart (right atrium) and then away from heart.

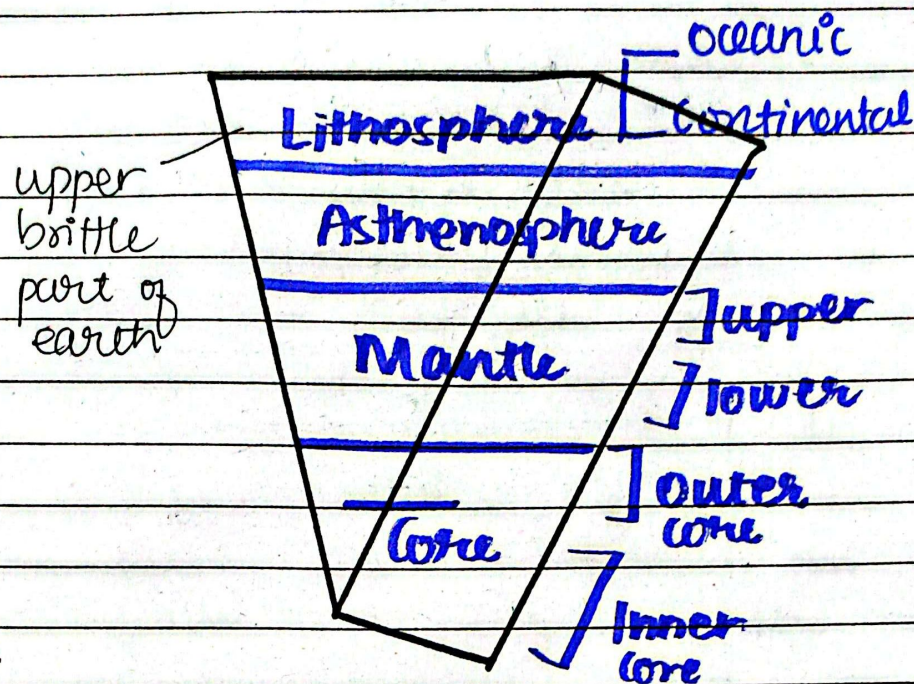
b. Internal Structure of Earth:

The Earth:

Earth is a solid, brittle and blue planet. It can also be defined as:

— The solid structure that is slightly flattened at poles, where life exists is called Earth —

- Quick Review



Visual Representation of Earth's Internal Structure:

Composition of Earth:

Earth having multiple layers, and spheres, is composed of

- | | |
|-----------|------------|
| → Silicon | → Hydrogen |
| → Argon | → Oxygen |
| → Lithium | → Nitrogen |

Processes At Earth:

The general reactions that happen at earth is Radioactive Decay of Elements i.e. Uranium.

c. Phenomenon Of Earthquake

Earthquake:

Earthquake is defined as:

—The shaking of Earth's surface due to sudden release of energy in the form of waves i.e seismic waves, is known as earthquake—

— Oxford Dictionary

Types Of Earthquake :

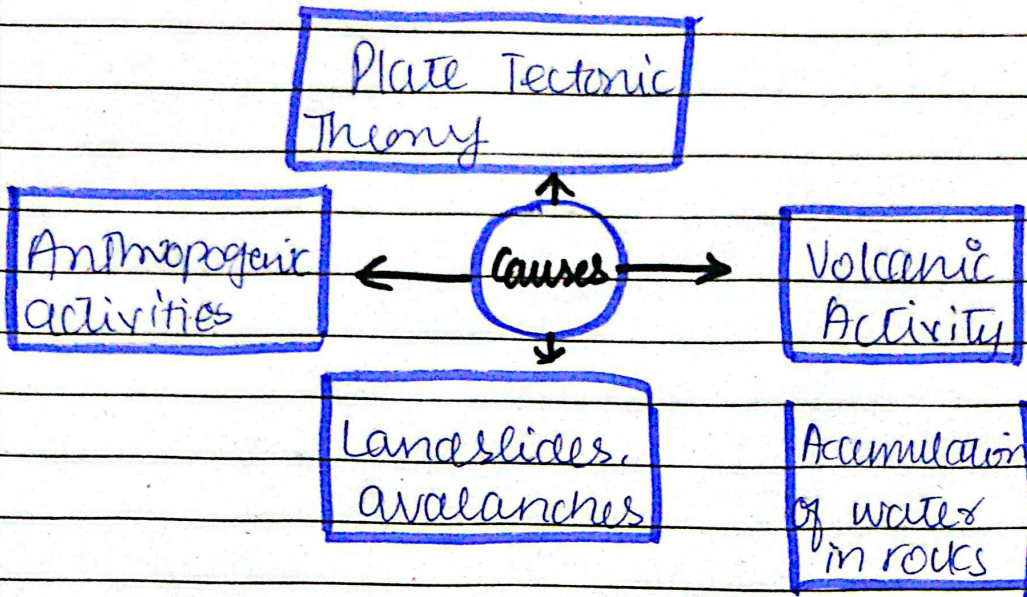
Deep → More than 300km deep

Shallow → More than 40km

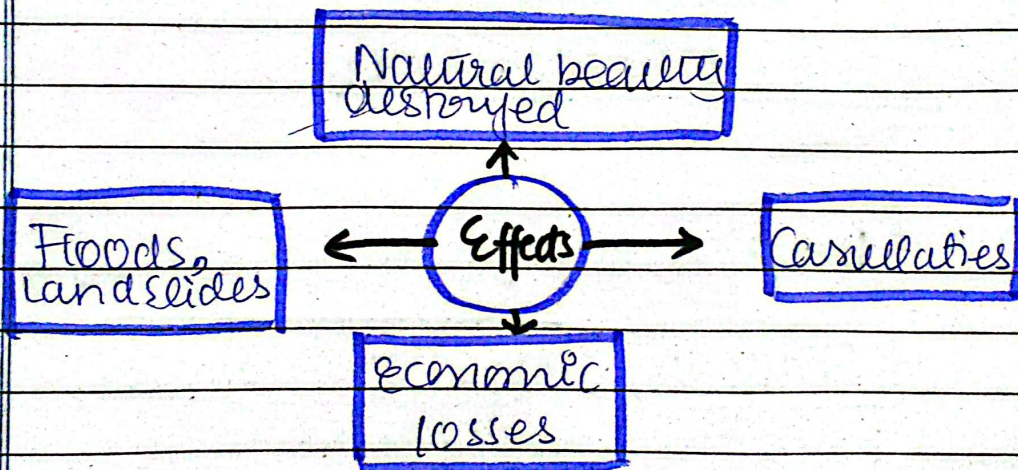
Intermediate → More than 30km

Causes of Earthquake :

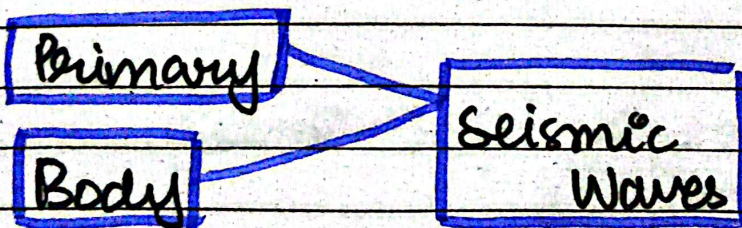
There are multiple causes of this natural disaster. Following are the few among them :



Effects Of Earthquake



Types Of Earthquake Waves



Tools For Measurement

