

Short question

Q1. What is natural disaster?

Ans. Natural disaster: There are a number of natural phenomena which have the potential to cause damage to human lives and property

For examples flood, earthquake, volcanism, landslides etc. Any natural event that causes loss to human lives and property is called natural disaster.

Q2. Define earthquake?

Ans. The sudden shaking of the earth crust is called earthquake. Earthquake waves originate within the earth crust and then spread out in all directions.

Q3. Which safety measures can help to save lives during an earthquake?

Ans.

- **Inside homes, find some safe place like door frames, table or bench.**
- **If intending to leave home do not use elevator.**
- **Outside home, stay away from the building, walls or power lines.**

Q4. Give measure to prevent floods?

Ans.

- **Construction of flood control dams, dikes and levees along the river channels.**
- **Plantation of trees on steep slopes.**
- **Provision of better drainage facilities in urban areas.**

Q5. Describe effects of flood in Pakistan?

Ans. Heavy floods hit Pakistan in august 2013.

- **118 people were killed and 812 injured.**
- **Flood damaged 27,847 house and 412,083 areas of ready crops.**
- **544439 people were affected by this flood.**

Q6. Basic some impact of cyclones.

Ans.

- **Basic affects of the cyclones include heavy rains, stormy winds and large storm surges.**
- **Rains from the cyclones cause mud slides or landslide in hilly areas.**
- **Cyclonic rain disrupts transportation and communication system along with destruction of infrastructure.**

Q7. What is desertification?

Ans. Desertification is the process of land degradation and gradual conversion of productive land into less productive or unproductive land.

Desertification is one of the most serious environmental and socio- economic problems in the world today.

Q8. What are the main causes of earthquakes?

Ans. Following are considered as the main cause of earthquakes.

- A. Plate tectonic.**
- B. Volcanic activity.**

Q9. Discuss the measures to check desertification in Pakistan?

Ans. Desertification is the process by which soil become infertile.

Measures:

- **Over use of soil must be stopped.**
- **Crop rotation should be ensured.**
- **Population increase must be controlled.**
- **Expansion of settlements should not be done at the cost of vegetative cover and cultivable land.**
- **Q10. Discuss the measures to mitigate the landslide affects?**

Ans. Measures to mitigate:

- Construction must be discouraged in landslides areas.
- Surface drainage may be controlled.
- Retaining walls may be constructed along steep slopes to enhance stability of the slope.

Q11. What is a landslide?

Ans. Landslide is down slope movement of large masses of rock and soil under the gravitational pull of earth.

Long question

Q1. Define volcanism and also describe its impact what safety measures are help in case of volcanism?

Ans. Volcanism: the sudden eruption of lava and gases from the earth crust is called volcanism.

Vent or neck: the materials eject to the surface of earth through the weaker parts of the earth crust. The pipe like outlet through which the lava and gases come out is called "vent". The lava accumulates around the vent forming a cone.

Magma and lava: the hot molten matter inside the earth is called magma. When it comes out to the surface of the earth, it is called lava.

Impact of volcanism:

1. Acid rain: The dangerous gases of lava can cause acid rain.

2. Affecting of temperature: The volcanic dust can block the sunlight affecting the patterns of temperature around the world.

3. Aircrafts: The dust can also cause aircrafts to crash.

4. Standing crops: The ash coming out of the volcano can destroy the standing crops.

Safety measure for volcanism:

- Stay away from the place of volcanic eruption.

- **Do not come out of the houses when volcanic ash is falling.**
- **Evacuate only when recommended by the authorities in order to be safe from volcanic material.**
- **Do not go to the low lying areas where there is a risk of ash falling.**
- **Close windows and doors to prevent ash from coming into the house.**
- **Avoid driving, as ash can damage engines and metal parts.**
- **Keep a wet cloth on your mouth and nose to prevent the inhalation of dangerous gases.**
- **Glasses can protect your eyes from harmful volcanic materials.**

Q2. Describe flood disaster in detail?

Ans. When a stream or river gets more water than its channel can hold and the water overflows the banks, this situation is called flood.

The water flows over the banks and onto the flood plain. Floods are the result of prolonged rainfall and rapid melting of large amount of snow. Sometimes the bursting of dams or levees also cause flood.

Impact of floods:

- **Flood washes out everything coming in its way.**
- **It smashes away the building, destroys the road, bridges and other infrastructure**
- **The destruction of communication network leads to the shortage of food items.**
- **Flood cause human casualties and livestock deaths.**
- **It badly damages the fertile agricultural land and washes out standing crops.**
- **It destroys the water supply system, sewerage lines and irrigation network.**
- **The spoilage of water source result into a shortage of clean water for drinking.**
- **Several diseases spread as a result of water contamination due of flood.**

Safety measures for floods:

- **All family members should know the safe route to the nearest raised safe site.**
- **In flood prone areas the walls should be made of bricks. Mud walls are more likely to be damage during floods.**
- **Watch T.V and listen radio for warning and advice.**

- **Pack warm clothing, essential medication, valuable, personal papers/documents etc in water proof bags, to be taken along.**
- **Inform the local volunteers/ officials; regard the address of the place you are evacuating.**
- **Turn off the main power switch in order to reduce the short circuit risk.**
- **Lock your home and take recommended evacuation routes to safe area.**
- **Do not allow children to play in, or near flood water.**
- **Avoiding entering flood water.**
- **Do not eat food, which has been in flood water.**
- **Use boiled water for drinking. Do not use the tap water directly.**
- **Be careful of snakes. Snake bites are common during floods.**

Q3. Write a comprehensive note on earthquake?

Ans. The suddent shaking of the earth crust is called earthquake.

Earthquake waves originate within the earth crust and then spread out in all directions. These waves move like the waves found in water pool, when a stone is thrown into it. The earthquake shocks continue for some time and then gradually die out.

The point in the earth crust where an earthquake originates is called focus. The place on the earth above the focus is called epicenter. This has been observed that most of the earthquake originated at a depth of 50 to 10010 km below the surface of the earth.

It has been recorded that eight to ten thousand earthquake occur annually in the world.

The shocks are stronger near the epicenter and become weaker away from it.

Measuring Earthquake: Earthquakes are measured with an instrument known as seismometer, which record the shaking waves on a graph. The scale used to measure the intensity of earthquakes' is called Richter scale.

Richter scale:

Unit	Intensity
1	You wouldn't notice this
2	30 times more energy than unit - 1
3	30 times more energy than unit - 2
4	30 times more energy than unit - 3
5	Windows may break
6	Damages building
7	Major catastrophe
8	
9	
10	Biggest ever recorded (9.5)

↑
Increasing energy
↓

Cause of Earthquake:

Following are considered as the main cause of earthquakes.

- a. **Plate tectonics:** when the tectonic plate break or slide abruptly against one another, they shake the earth causing earthquakes. Such movements usually occur along the fault lines where plates meet with each other.
- b. **Volcanic activity:** The sudden eruption of volcanoes result in the shaking earth crust causing earthquakes.

Impact of earthquake:

- The shaking of the earth crust result in building collapses, splitting of roads and cracking of bridges.
- Earthquake may also cause landslides which can block the roads and can bury buildings.
- It can damage water supply system, gas pipelines, electric poles and wires, which may cause fires.

- **Earthquake in the ocean floor can cause giant waves called tsunamis in shallow coastal water. These waves are very powerful and sometimes smash away entire cities.**

Earthquakes in Pakistan: Pakistan is located in earthquake prone area. The Indian plate is constantly moving northward and collides with the Eurasian plate resulting into the formation of faults, Movement of plates along these fault lines cause earthquakes in Pakistan.

Q4. Write down safety Measures for Earthquakes and also construction of building in earthquake prone areas?

Ans: Following tips may be followed for keeping safe during an earthquake.

- **Take cover under a table or other sturdy furniture; kneel, sit or stay close to the floor.**
- **Do not stand in doorways. Shaking can cause door to fall and cause serious injuries.**
- **If you are living in a katcha house, the best thing to do is to move an open area where there are no trees, electric or telephone wires.**
- **If your home is badly damaged, then leave it collect water, food, medicines and other important items before leaving.**
- **Avoid places having loose electrical wires and do not touch metal objects that are in touch with them.**
- **Wear shoes to protect your feet from debris.**
- **Help injured or trapped persons.**
- **Help your neighbors. Then infants, the elderly and people with disabilities ay require special assistance.**
- **If sewerage lines are damaged, avoid using the toilets. If water pipes are damaged, avoid using water from tap.**

Construction of building in earthquakes prone areas:

- **The whole building should be in the form of a single structure so that it can move as a whole.**
- **There should be enough space between two adjacent buildings so that the collapse of one building may not destroy the other.**
- **Minimum glass should be used.**
- **The foundation of building materials should be as strong as possible.**
- **Lighter building materials should be used in order to reduce the damage in case of collapse.**
- **The use of wood and reusable building materials may reduce the cost of rebuilding.**