Std.: 8 (English) General Science

Chapter: 9

Q.1 Give scientific reasons **10**

1 Don't use lifts at the time of earthquake.

Ans i. Sudden vibration on the earth and shaking of the earth's surface/ ground is called an earthquake
ii. During earthquake, there is possibility of fire or the power supply may be cut off completely.
iii. In such cases, the person may be trapped inside the lift and rescue operation may be difficult.
iv. Hence, it is advised to avoid lift in multistoried building and instead use staircase at the time of earthquake or even immediately after earthquake.(aftershocks).

2 Explain the relation between continuous rains and landslides. Give reasons.

Ans i. During heavy rains, water enters the cracks present in hard rocks causing weathering of these rocks.
ii. Due to this the weight of these rocks increases and they slide on the sloppy region and settle at the lower side leading to landslides.
iii. Heavy rains may lead to landslides and this causes loss of human lives as well as huge financial loss.

3 Is it safer to find shelter under things like a bed, table at the time of earthquake.

Ans i. Yes, it is safer to find shelter under things like a bed, table at the time of earthquake if you are at home.
ii. Do not get scared and instead of running here and there, stand still at one place.
iii. Either sit on the floor or below the bed or any other furniture and cover yourself until the movement of the earth stops.
iv. If there is no table or any other shelter then sit in any corner of the room and cover your head by folding your hands around it as causalities generally happens due to the collapse of roof or walls.

4 The foundation of earthquake-proof building is separated from other land.

Ans i. The constructions which do not get damaged due to earth movement's upto a certain limit is called earthquake resistant buildings.
ii. Advanced technology is used for earthquake resistant construction.
iii. Separating the foundation of the building from the land prevents the building from collapsing when the earth shakes.(This technique is referred to as base isolation technique).
iv. During seismic vibrations the base vibrates but the transmission of these vibration to the structure is minimized.
This method is employed with the help of bearings, spring, etc. which reduces the intensity of vibration.

5 In monsoon, don't take shelter near hillside.

Ans i. Landslides are considered as the movement of mass of rock, debris or earth down a slope.
ii. Natural disasters such as heavy rains, storms, floods cause landslides.
iii. In monsoon, during heavy rains there are more chances of landslides in mountain regions.
iv. Hence, it is advisable not to take shelter near hillside in monsoon.

Q.2 Write answers based on given diagram/paragraph **3**

1 With the help of following picture, explain your role in the disaster management.

Ans i. Disaster can strike any person at any time and it affects millions of people each year and hence it is important that one should be aware about few safety measures.

ii. One should be aware about what protective measures to be taken before, during and after a disaster has strike.

iii. One should be aware about the plan for evacuation of people from the disaster site.

iv. One should be trained in using the fire extinguisher and also be ready with a medical kit.

v. One should be able to contact the right people for help like ambulances, fire brigade, local police, etc.

vi. Also one should be able to get help from local people as volunteers to help the rescue operation team.

Q.3 Answer the following **21**

1 If a crowd gathers at the place of earthquake, what would be the difficulties in relief work ?

Ans i. After earthquake strikes a particular area, the causalities are always huge.

ii. The site may be flooded with people who will be volunteers, observers, relatives of people from that area, etc.

iii. As these people are not trained to handle such situations they can create more problems for the rescue team.

iv. Also, when the crowd is larger than the victims, then the rescue team finds it extremely difficult to manage the situation. For example, movement of vehicles like ambulance, fire brigade, etc. find it difficult to reach the site or take victims quickly to the hospitals when there is too much of crowd.

Prism
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2 Is there any relation between dam and earthquake? Explain.

Ans i. Many dams are built in the seismically active regions, including the Himalayas, Southwest China, Iran, Turkey, etc.

ii. The accepted explanation of how dams cause earthquakes is related to the extra water pressure created in the micro-cracks and fissures in the ground under and near a reservoir.

iii. When the pressure of the water in the rocks increases, it acts to lubricate faults which are already under tectonic strain, but are prevented from slipping by the friction of the rock surfaces.

iv. Also, large water reservoirs may trigger earthquake due to weight of the water or more ground water pore pressure.

v. Given that every dam site has unique geological characteristics, it is not possible to accurately predict when and where earthquakes will occur.

3 What are the specifications of an earthquake-proof building ?

Ans i. The constructions which do not get damaged due to earth movements upto a certain limit, are called earthquake resistant buildings.

ii. To construct tall building, Indian Standard Institute has made some code of conduct.

iii. Buildings are constructed as per I.S. 456 and earthquake resistant constructions are performed as per IS 1893 (Criteria for earthquake resistant design of structure) and IS 13920 (Ductile detailing of reinforced concrete structures subjected to seismic forces).

iv. Advanced technology is used for earthquake resistant construction.

4 Make a survey of your school according to the plan of disaster management and write the point wise information.

Ans **Primary information of the school:** It should include information such as name and address of the school and Head Master, the total number of school staff and name and phone numbers of school management

members.

School disaster management committee: Get the information of the members involved in the disaster management committee.

Detailed information about school building: Note the number of rooms, classroom, age of the building, types of roofs under this point.

Information about school ground: It should include information like distance of ground from the main road, types of playgrounds.

Daily routine of the school: It should include information like the working time of the school, lunch break time for the school.

Possible hazards in the school: It should information such as a record of past disaster happened in school, current planning for overcoming disasters.

Disaster management map of the school: It should have information regarding all the buildings of the school, entrances and exit gates, place of probable danger, safer place at the time of disaster.

5 Prepare a chart showing the 'Do's' and 'don'ts' at the time of earthquake.

Ans

Do's	Don'ts
If at home, sit on the floor, below the bed or furniture and cover yourself	Do not get scared and run here and there
If in vehicle, then park your vehicle at a safe place and sit inside it	Do not wait near or below tall building, tree or electric pole
Switch off the electric supply	Don't use lifts
Use staircase instead lift	Do not sit in discomfort for long
Use torch or battery	Do not use candles or lanterns or matchbox

6 Explain the effects of landslide.

Ans The following are the effects of landslide :

i. Rivers get flooded and change their paths.
ii. Displacement of waterfalls, formation of artificial water reservoirs.
iii. There is life and financial loss on a large scale, as trees, buildings, rocks on sloppy area collapse on low-lying land.
iv. Landslide affects the traffic.
v. Landslide destroys plant life on it.

7 Make a list of Institutes and Organization who provide help for disaster management. Collect more information about their work.

Ans

i. The Government of India in collaboration with Indian Mountaineering Institute and International centre for Integrated Mountain development has launched a program to forecast the landslides and its effects.
ii. Institute of geology and world geological forum also help this forecast.
iii. Other Institutions such as National Disaster Response Force (NDRF), National Disaster Management Authority (NDMA), National Institute of Disaster Management (NIDM), etc. are actively involved in providing help for disaster management.
iv. With the help of modern equipment and scientific studies conducted in these institutions, authorities are able to take timely action and provide help.

Q.4 Extra data **1**

1 Are there any possible places of landslide in your area ? Collect information from experts.

Ans Landslide most commonly occur near mountains during heavy rains.