9. DISASTER MANAGEMENT

Q 1) Answer the following in your own words.

a. Explain the relation between continuous rains and landslide. Give reasons.

Ans. 1) Before the actual landslide takes place, many changes occur in the surrounding hilly ground. 2) The hard rocks develop cracks and crevices which are natural changes but due to man-made activities, the cracks get widened due to erosion. The cracks make the big rocks to break into smaller stones. And the cracks widen further due to heavy rainfall. 3) When these rocks get eroded and they fall down along with soil from the slopes, this process gets speeded up due to rainwater.

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

Ans.

Do's	Don'ts
1) Do drop to the ground.	1) Don't wait in the multi-storeyed buildings, do not use lifts instead use stairs to descend.
2) Keep the electrical appliances and cooking gas closed.	2) Do not stand near buildings, trees or electric wires and poles.

3) Use torch or battery.	3) Do not use candles, lantern or match-sticks.
4) Do stand quietly at one place.	4) Do not sit in discomfort for a long time.
5) Protect yourself under some hard covering, cover and protect the head and face especially.	5) Don't get scared and don't panic.
6) If in a vehicle, park the vehicle and sit inside it.	6) Do not wait near or below tall buildings.

c. What are the specifications of an earthquake - proof building?

Ans. 1) Earthquake resistant structures are the structures designed to protect buildings from earthquakes. The earth-quake proof building is such that even after an earth-quake is caused it should not damage building. 2) To construct tall buildings 'Indian Standard Institute' has set some 'code of conduct' i.e. IS 456, IS 13920 & IS 1893. Advanced technology is used for earthquake resistant construction. Modern equipment's like laser ranging, long baseline, Geiger counter, creep meter, stain meter, tide gauge, tilt meter, and volumetric strain gauge are used. 3) The foundation of earthquake-proof building is separated from lower land. The walls are of less weight or they are wooden. 4) The houses are constructed in special way using light materials in earthquake-prone regions.

d. Explain the effects of landslide.

Ans. 1) Most of the rivers originate in the hills and mountains. When there is landslide, rivers get flooded and change their paths. 2) Displacement of waterfalls, formation of artificial water reservoirs. 3) Due to the falling debris, soil and rocks make the trees at the base of hillside uprooted, leads to the loss of plant life. 4) If landslide occurs in a village the constructions done by the villagers on the slope can get totally damaged. 5) Also there is large scale damage to property and life. 6) Eg. The tragic case of Malin village, the entire village was buried due to landslide and accompanied rainfall. 6) Transportation is affected as the roads and railway tracks get blocked due to debris. 7) There is large scale loss of life and financial loss as trees, buildings, rocks on sloppy area collapse on low-lying land.

e. Is there any relation between dam and earthquake? Explain.

Ans. 1) It is most likely for occurrence of earthquake near dams. We know, dams contain abundant water stored in it. The water puts extra weight on the ground. 2) Initially there may not be any weight, but later due to construction of dam; suddenly the pressure of this weight gets high that the ground experiences the tension. 3) If such area is already earthquake-prone, then it is at risk for occurrence of earthquake. 4) Considering the theory of plate tectonics, continuous movement's takes place in the earth's surface. 5) When the pressure of water in the rocks increases it acts to lubricate the faults which are already under tectonic

strain, but are prevented from slipping by the friction of the rock surfaces. 6) If over such fragile plates, the dams are constructed then the chances of earthquake are enhanced

2) Give scientific reasons.

a. It is safer to find shelter under things like a bed, table at the time of earthquake.

Ans. 1) When earthquake takes place, due to the vibrations in the earth's surface, there is a possibility that the roof and walls of the house may fall. 2) This collapse can cause severe head injury which can be fatal. One can take shelter of a table, and if there isn't any then one must sit in any corner of the room and cover head by folding hands around it. 3) If one is at home, then you need not get panicked and instead must stand still at one place or sit on the floor or below the bed until the movement of the earth stops.

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

Ans. 1) During monsoon, land slide chances are maximum due to excessive rainfall. Due to rainwater, the soil and rocks from the hillside get pushed down due to the flow. 2) The debris slides to the lower heights from the hills. So if one is taking shelter near the base of the hillside then can get buried in the debris. 3) Therefore, in monsoon, one should not take shelter near hillside.

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

Ans. 1) The electricity supply is required for lifts or elevators, which can be hindered due to earthquake.2) There are chances of fire due to short circuit. Also we may get trapped in the elevator. 3) The building may also fall due to earthquake. It is better to use stairs at the time of such calamities, to safely come out of the building. Therefore, it is said that lifts should not be used at the time of earthquakes.

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

Ans.1) The surface of the earth shakes during earthquake, which causes seismic waves that are responsible for the movements of the earth's surface. 2) The shocks and waves which are formed in the interior of the earth spread on the surface in all directions, which causes collapse of the building and other structures on the land. 3) The Indian standard Institute has made some code of conduct. These are constructed as IS. 456 (earthquake resistant design for structure) and IS 1392 (Ductile detailing of reinforced structures subjected to seismic forces). 4) Advanced technology like laser ranging long baseline modern equipment with other like Geiger counter, creep meter, strain meter, tide gauge, etc. are used. To prevent these disasters the foundation of earth-quake proof building is separated from lower land.

Q 3) If a crowd gathers at the place of earthquake, what would be the difficulties in relief work?

Ans. 1) One should adopt sensibility and not crowd at the place of relief site making it difficult for rescue team to help. 2) Other people can look out for injured ones and first aid can be given to them, at other place from site.3) If there is crowd the ambulances and the fire engines will be unable to reach the spot in time. 4) It will be difficult for the personnel from disaster management cells to act in time, and difficult to manage the situation and thus such crowding should never be done.

Q 4) Make a list of the institutes and organization who provide help for disaster management. Collect more information about their work.

Ans. i) National Institute of Disaster Management

ii) Emergency Management Institute

iii) Federal Emergency Management.

iv) National Disaster Response

v) International Association of Emergency

vi) National Disaster Management Plan

vii) National Civil Defence

viii) National Crisis Management Committee

ix) Joint Assistance Center

x) Centre for Disaster Management Maharashtra etc.

Q 5) Make a survey of your school according to the plan of disaster management and write the pointwise information.

Main points	The things to be noted
Primary information of the school	a. Name and address of the school. b. name and residential address of the Head Master with contact number. c. Names and contact numbers of school management numbers. d. Total number of staff.
School Disaster Management Committee	a. Fire extinguisher b. Awareness c. Instructions. d. Traffic Mangement e. Safety f. communication committee (2-3 members / sub-committee)
Detailed information about school building	a. Total number of rooms b. Number of classrooms c. Classes d. Type of roof (wooden/ cement/ sheets) e. Age of the building, building year.
Information about school ground	a. Type of play ground-prayers space, kho-lho, kabaddi and

	other grounds etc. **b. Distance of the ground from main road.**
Daily routine of the school	**a. time to start, school breaks and time to leave the school.** **b. Daily activities taking place in the school.**
Possible hazards in the school	**a. name and type (normal/ medium/ acute) of the danger.** **b. Destruction in the past and current planning.**
Disaster management map of the school	**The map must have following contents-** **All buildings of the school, their structure, grounds, entrances, place of probable dangers in the school, safe places at the time of disaster, nearst road. This map must be at the entrance of the school and all students must be given detailed knowledge about it.**

Q 6) Are there any possible places of landslide in your area? Collect information from experts.

Ans. In the urban areas mountains and hills are away from the residential areas so there is less possibility of life and property loss. There are no any possible places of land slides in my area.

Q 7) With the help of following picture, explain your role in the disaster management.

Ans. i) The basic role of a student is to have awareness of what to do during and after disasters. ii) There would be lesser panicking, paranoid and uncontrollable people running around. iii) When disaster strikes there will be lesser the loss of life. iv) Knowing what to do after disaster and at least basic first aid, will enable students help the authorities in saving lives.

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