

## 10. Disaster management

1. Complete the table. (Motor accident, land sliding, forest fire, theft, riot, war, epidemic, drought, locust attack, financial crisis, flood, famine)

| Disaster          | Symptoms   |
|-------------------|--|
| 1. Motor accident | 1. There is a traffic jam  |
| 2. Landsliding    | 2. The gravity and severity of the landslide depends upon location of the landslide.   |
| 3. Forest Fire    | 3. There is smoke spread out in the atmosphere. If it takes place in natural forests, the birds and the animals run helter skelter to save their lives. The huge flames can be seen. |
| 4. Theft          | 4. The latch or the lock is broken. The valuables from the home or shop are missing. Everything in the house is strewn here and there.   |
| 5. Riot           | 5. The cities, towns or villages show signs of tense atmosphere. People gather in groups and discuss something secretively.  |
| 6. War            | 6. There are tense conditions in the border areas of both the countries. Both the countries, try to instigate each other.  |
| 7. Epidemic       | 7. Sudden rise in the number of patients of that particular disease.<br>Dispensaries and   |



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|                      | hospital are suddenly crowded.   |
| 8. Drought           | 8. There is scarcity of water. Women of the house bring water from the far-off water bodies. Tankers are seen supplying the water.                           |
| 9. Locust attack     | 9. The locusts are seen hovering over the crops. The standing crop is seen to be attacked.   |
| 10. Financial crisis | 10. The financial security of the nation is seen dwindling. There is lull in the share market.   |
| 11. Flood            | 11. The water level of canals, streams, rivers, etc. is seen to be rising.   |
| 12. Famine           | 12. Rainfall is scanty. The water from the reservoirs and canals also recede. The crops do not grow. The crevices on the land and farms can be seen clearly. |

(Table continued here)

| Effects   | Remedy  |
|---|---|
| 1. Somebody is injured. The car also gets damaged. If accident is on larger scale, many people are injured. Some may die too. | 1. First disperse the crowd. The injured person should be given first aid and then rushed to hospital for immediate medical help. |
| 2. If there are houses located near the landslide or on cliffs, there would be a major disaster. The houses and people        | 2. The authority should be informed. Injured and trapped people should be removed from the rubble and given                       |



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| therein are most likely to get buried. The traffic will also halt if the landslide is near the major roads.  | medical help as soon as possible.   |
| 3. Everything turns into ashes.  | 3. The fire-fighting units should be called to extinguish the fires if they are spreading in nearby areas. We should also help in putting off the fire. If anyone is injured, he/she should be given medical help.          |
| 4. There are financial losses and also mental and emotional shock is severe. In some cases, physical injury can also happen.   | 4. Police should be called to nab the criminals.  |
| 5. There is financial loss for all the rioting groups. The belongings, houses, shops etc. are destroyed or damaged. Property is looted. Ladies and children suffer the most as they are easily victimized. | 5. As children, we cannot stop the riots. But we can take help of police force. We can establish mohalla committees for peaceful behaviour with each other. For that the wise members from each community will be summoned. |
| 6. Tremendous destruction causing loss. Many lives are lost. The costs of all the items rise due to war conditions. Entire nation faces insecurity.  | 6. The peace agreement in both the conflicting countries.   |
| 7. Many people contract the communicable disease and thus are infected. Some of them die due to further complications. There is great  | 7. Mass immunization programmes to be undertaken Safety of food and potable water to be enhanced.   |



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| demand for medicines in the pharmacy shops.   |   |
| 8. It is a time of dry famine. The crops are unable to grow to the fullest. Cattle suffer due to lack of water and grass.   | 8. Water management to be done. Rainwater harvesting, and other methods of water conservation to be undertaken by drought prone villages.   |
| 9. Crops are damaged to a great extent.   | 9. Proper spraying of organic pesticides.   |
| 10. The poverty rises. The buying power of people is reduced. The buying-selling activities are seen to be suspended. Entire economic systems collapse.                                   | 10. The employment opportunities should be increased. People should be helped to set up the business.   |
| 11. The low-lying and the coastal areas are seen to be submerged. The entire region is waterlogged.   | 11. People and animals have to be shifted from the water logged region to the safer places at the heights. After the flood water recedes the care has to be taken for controlling epidemics of communicable diseases that can spread rapidly due to deteriorating conditions in the region. |
| 12. People and cattle are starved. Due to lack of water and food the cattle die. There is major scarcity of the food grains. The prices of the food grains and other items, go on rising. | 12. In the drought-prone regions, famine is very common. So care is to be taken for water conservation before it rains. Select the crops that are resistant to such dry conditions.   |



## **2. Write notes.**

### **a. Disaster management Authority.**

**Ans.** Disaster Management Authority is the body that works at the level of government from national level to village level. This work is basically about management of any disaster and tackling the problems of the affected people. At National level there is National Disaster Management Authority for which the Prime Minister is the chairman. For every state there is State Disaster Management. Authority, where the chief minister of every state is the chairman. Under the state level, there are district level units where district collector is responsible for disaster management and implementation of rehabilitation schemes. Below district level authority there are Taluka and then Village Disaster Management Committees. The Tahsildar is the chairman for Taluka level while the Sarpanch of the village is responsible for management of disasters at village level. Collector of each district helps in planning, coordinating and controlling the implementation of rehabilitation programme and also gives essential instructions and reviews the entire system.

### **b. Nature of disaster management.**

**Ans.** Disaster management involves either prevention of disasters (Pre-disaster management) or creating preparedness to face them (Post-disaster management). The action plans are prepared for managing disasters. This is done after studying the different aspects such as preventive measures, rehabilitation and reconstruction plans. The disasters are tackled by executing action plans in the following steps: Preparation, redemption, preparedness, action during actual disaster, response, resurgence and restoration. At Every level there are other voluntary organizations and Government meteorological institutions for their help.

### **c. Mock drill**

**Ans.** Mock drill is the practice to check whether there is preparedness for dealing with the sudden attack of disaster. For this purpose, virtual or apparent situations that simulate the disaster are created. The reaction time for any type of disaster is checked by such activity. In the presence of trained personnel, the execution of the rescue plans are observed. People also understand their responsibilities at the time of actual disaster. The experts also check execution of plan designed for disaster redressal. By such mock drills, the efficacy of the system can be understood. In future, when actual calamity strikes, there is already preparation for disaster redressal. Therefore, mock drill is useful.

### **d. Disaster Management Act, 2005**

**Ans.** Government of India has made Disaster Management Act in 2005. The affected people are given all necessary help as per this act. With the humanitarian view, people are rehabilitated and helped them to come back to normalcy after the disaster. As per this Act, National Disaster Response Force has been established. This force consists of 12 divisions in entire India which are attached with Indian Army. The head quarter is located in Delhi, but the action is taken all over the country with the help of army. As per the Act, in Maharashtra National Disaster Response Force is in action through State Reserve Police Force. The personnel of this force are trained accordingly, and they take part in the rescue work during different disasters.



### 3. Answer the following questions.

#### a. Explain the role of district disaster control unit after occurrence of any disaster.

**Ans.** (1) District control unit looks after the disaster management of the district.

(2) It is immediately formed either after the impact of disaster or if warning is given about some upcoming disaster.

(3) District-wise Disaster Control Unit performs following role: (i) The review of various aspects of disasters is done.

(ii) Through the disaster control unit there is continuous contact established with various agencies like army, air force, navy telecommunication department, paramilitary forces, etc. for obtaining help.

(iii) The unit also coordinates with various voluntary organizations for their help in disaster management.

#### b. Give the reasons for increase in human disasters after the World War-II.

**Ans.** (1) After Second World War, the feelings of peace and brotherhood among the global citizens were lost. The geographic, religious, racial and ethnic differences sprang up tremendously.

(2) Atrocities that Nazi has performed made deep impact on the minds of people. Terrorism, abduction, robberies and social unrest increased in almost all the countries.

(3) The financial losses had incurred in the World War II. The misuse of science and technology was done to retrieve these deficits.

(4) At the end of World War II, the atomic bombs were dropped in Japan. This has created health problems in the entire world.

(5) Social inequality, economic disparity, racial and religious differences were some adversaries that created unrest in the country.

(6) Later, the neighbouring nations kept on fighting. The geographical boundaries were changed. People always had feelings of insecurity. The terrorism flourished. All such instances gave rise to man-made disasters.

#### c. Which are the objectives of disaster management?

**Ans.** (1) To save human life from disasters. To help them for moving away from the place of disasters by rapid action

(2) To supply essential commodities to the affected people. This helps to reduce the gravity of disaster. People are given grains, water and clothes and other basic necessities under this objective.

(3) To bring back the conditions of affected people to normalcy

(4) To rehabilitate the affected and displaced victims.

(5) To think and execute the protective measures in order to develop capability to face the disasters in future.

#### d. Why is it essential to get the training of first aid?

**Ans.** When there is a disaster, we need to immediately help the victim Till the medical help arrives, one should be in position to treat the injured and save his or her life. In such cases, knowing first aid is essential. Such kind of a need may arise in case of our parents, our siblings at home or with friends in school. Those who are injured should be treated at once. If



we know about techniques of first aid, we can save such person before the medical help arrives. Therefore, it is essential to get the training of the first aid.

**e. Which different methods are used for transportation of patients? Why?**

**Ans. For the transportation of patients following methods are used:**

**(1) Cradle method:** This method is used for children and persons with less weight.

**(2) Carrying piggy back:** This method is useful in carrying the unconscious persons.

**(3) Human crutch method:** If one leg of the person is injured, then the victim is supported with minimum load on the other leg. This is called human crutch method

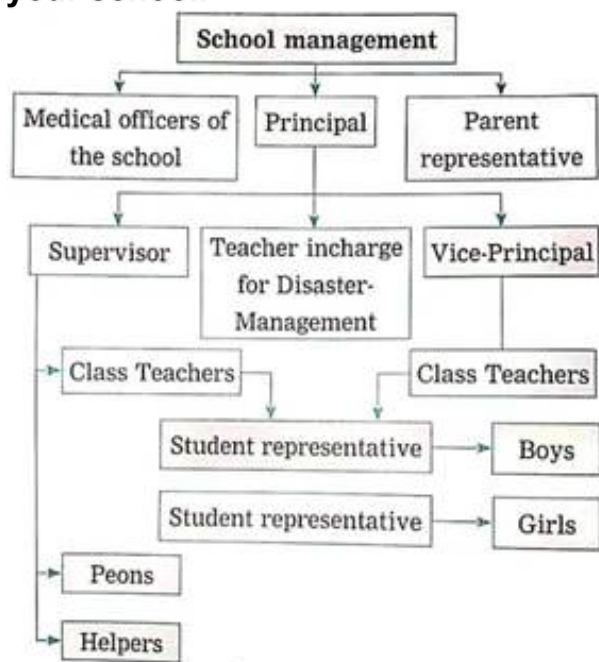
**(4) Pulling or lifting method:** For carrying an unconscious person for a short distance this method is used.

**(5) Carrying on four-hand chair:** This method is used when the support is needed for a part below waist region.

**(6) Carrying on two-hand chair:** Patients that cannot use their hands but can hold their body upright, are carried by such method.

**(7) Stretcher:** By making temporary stretcher in case of emergency, the unconscious patient can be moved. Such temporary stretchers are made by using bamboos, blanket, etc.

**4. On the basis of the structure of disaster management authority, form the same for your school.**



**5. Write down the reasons, effects and remedial measures taken for any two disasters experienced by you.**

**Ans.** *(Students are expected to write the answer based on their own experiences.)*

**7. Which different aspects of disaster management would you check for your school? Why?**

**Ans.** For the pre-disaster management at school following aspects would be inspected.

(1) Are the telephones of the school working properly?

(2) Is there a first-aid box in each class?

(3) Are there any basic medicines in the school?

- (4) Is the team ready for rescue of smaller children from lower classes?
- (5) Has monitor or prefect participated in a mock drill? Does he/she know about first aid?
- (6) Is the contact of parent representative available in emergency situations?
- (7) Is the Medical Officer/Doctor present on the school campus?
- (8) Is there enough drinking water and some dry snacks available in the school?
- (9) Are the staircases and corridors suitable for quick evacuation of the children?

## **7. Identify the type of disaster**

### **(1) Terrorism.**

**Ans.** Man-made, intentional. Due to the activities of terrorism, many innocent lives are lost. Many are seriously injured. Some become crippled for their entire life. Buildings, monuments, vehicles everything is completely destroyed. There is rift between different religions or sects. The peaceful atmosphere is disturbed. The entire society is under the constant fear of insecurity.

### **(2) Soil erosion.**

**Ans.** Natural, geophysical, geological. When the upper fertile layer of soil is lost, it becomes barren. The trees are uprooted. The fertility of the area is lost. The land becomes unsuitable for cultivation or farming. Due to wind, flowing water or grazing animals the naturally occurring soil erosion becomes hazardous for the environment.

### **(3) Hepatitis.**

**Ans.** Natural, biological, animal-origin. Hepatitis is a viral disease which spreads through the contaminated food and water. The outburst of epidemic of hepatitis is difficult to control. As in big cities the quality of road side food is often consumed, the spread of hepatitis is fast. People suffer due to hepatitis.

### **(4) Forest fire.**

**Ans.** Natural, biological, plant-origin. Due to heat and wind, the dry grass and the shrubs catch fire in the forests, resulting into forest fires. Such rapidly spreading forest fire can finish the biodiversity within a very short span of time. It is difficult to extinguish the naturally lit forest fires. Many trees and other vegetation, animals and birds along with their habitats are destroyed due to forest fire. The smoke emanating causes the air pollution.

### **(5) Famine.**

**Ans.** Natural, climatic. Due to famine there is severe water scarcity. In absence of water, the fields and farms become barren as the crops cannot grow without water. There is shortage of food grains. The cattle dies due to want of water and grass. Local people have to migrate in search of food, water and shelter.

### **(6) Theft.**

**Ans.** Man-made, intentional. Theft causes economic loss for the one whose money or valuables are looted. The person who suffers the loss also undergoes mental and emotional shock. Sometimes the thief may also cause physical harm. It may cost on life too.

**8. Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?**





**Ans.** The above signs are warning symbols which should never be ignored.

The meaning of each is given below. They are giving warnings about explosive, inflammable, oxidizing, compressed gas, corrosive, toxic, irritant, environmentally hazardous and health hazard.

**(1) Explosive:** Some materials are explosive. While handling such materials care should be taken. We should not take anything that would cause fire leading to explosion. Explosion occurs, there would be a major disaster causing great loss of life and property. Thus if this sign is seen, great care has to be taken

**(2) Inflammable:** Similar to explosive substances, the inflammable materials can also catch fire easily. Therefore, to warn people such sign is given on materials that can cause hazard by burning.

**(3) Oxidizing:** Some chemical substances are oxidizing. They carry out chemical reactions with a rapid speed. E.g. If potassium permanganate falls on the cloth, it starts the reaction on its C-C bonds. Due to such property of carrying out reactions, the cloths may catch fire. Therefore, oxidizing substances should be handled with care.

**(4) Compressed:** Compressed substances are filled under pressure in some container. If mishandled, they can come out of the container by bursting it open. This can cause some injuries,

**(5) Corrosive:** The corrosive substances are very reactive. The mere touch of corrosive substances can cause destruction of skin, eyes, respiratory passages, digestive organs, etc. rapidly. Just touching or smelling of such substances can cause major injury and thus warning sign of corrosive substance should never be ignored.

**(6) Toxic:** To taste a toxic substance or even to smell it, can lead to death. The packing of these substances are therefore marked as dangerous. They should be avoided as far as possible.

**(7) Irritant:** When skin or any delicate part of the body comes in contact with the irritant substance, it can cause harmful reaction. Especially, eyes, nasal mucosa and skin are affected by contact with corrosive substances.

**(8) Environmentally hazardous:** Many substances cause harm to the environment due to their toxicity. Air, water or soil can be polluted due to such pollutants. When environment is affected, ultimately these hazardous effects come back to human species. Therefore, such substances should be carefully used. Their use should be judicious and controlled.

**(9) Health hazard:** The substances that can cause hazard to our health should always be distanced from us. Such substances should not be kept in proximity. As far as possible they should be kept away and handled with great care if needed for any work. Materials marked with health hazard can cause severe toxicity.

## 9. Explain that why is it said like that?

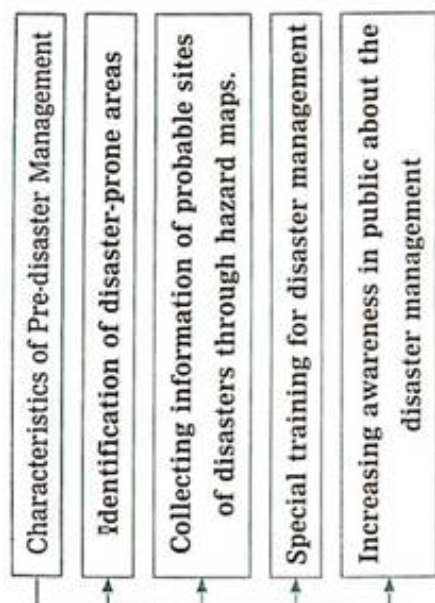
### A] Mock drill is useful

**Ans.** Mock drill is the practice to check whether there is preparedness for dealing with the sudden attack of disaster. For this purpose, virtual or apparent situations that simulate the disaster are created. The reaction time for any type of disaster is checked by such activity. In the presence of trained personnel, the execution of the rescue plans are observed. People also understand their responsibilities at the time of actual disaster. The experts also check execution of plan designed for disaster redressal. By such mock drills, the efficacy of the system can be understood. In future, when actual calamity strikes, there is already preparation for disaster redressal. Therefore, mock drill is useful.

### B] Effective disaster management makes us well prepared for future.

**Ans.** Disaster can strike any time. The sudden disasters can be man-made with some bad intentions or may be accidental. When natural calamity strikes suddenly with a huge impact, large scale devastation of property and general environment degradation occurs along with substantial mortality of people and animals. Therefore, it is most appropriate to have the preparedness to reduce the impact of any Future disasters. We cannot control the onset of the natural disaster, but we can definitely reduce the harsh effects of the disaster by following disaster management plan.

## 10. Complete the following chart. (Rotate your phone)



## 11. Following are the pictures of some disasters. How will be your pre- and post-disaster management in case you face any of those disasters?

**Ans.** In the pictures given, following disasters are shown: (1) Two groups of children are fighting with each other.

(2) There is gas leakage from the LPG cylinder.

(3) There is heavy downpour due to cloud bursting which has led to waterlogging in the town.

(4) There is cyclone causing a tornado. (Commonly called a twister)

| <b>Disaster</b>                    | <b>Pre-disaster Management</b>   |
|------------------------------------|--|
| (1) Fight between the two groups   | 1. We will try to sort out the problem between the two groups. If that is not possible, will call the elders or teachers. If the fight is among the elders then police should be called.   |
| (2) Gas leakage                    | 2. First and foremost, the windows and the doors will be opened immediately. We shall call the gas agency customer care department for help. The lights and the electrical equipment will not be turned on to avoid the accidents.   |
| (3) Downpour due to cloud bursting | 3. If the warning of the heavy rains is broadcast then people staying in low lying areas should be taken to the safe places. Schools and colleges are kept closed. If such students or young children are stranded anywhere, they should be helped to reach their destinations before the rain starts. |
| (4) Tornado                        | 4. The warning of cyclonic tornado is given much before its approach due to  |



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|  | <p>modern techniques used at Meteorological department. The consequences of such event will be disastrous so as far as possible we shall not go out of house. If house is not in proper condition, then shelter is to be taken in any safe place.</p> |
|--|---|

(Rotate your phone)

|  |
|--|
| <p><b>Post-disaster management</b></p>   |
| <p>1. If the fight is taking place, we shall try to separate the two. We shall check-up if anyone is injured. If injured, we shall give him first aid. We will also counsel them that they should not fight like this.</p>                 |
| <p>2. If the gas is already leaked in the house, we shall move out immediately along with pets if any.</p>   |
| <p>3. By heavy rains, the transportation comes to halt. The water enters the houses in low lying areas. We shall help the people to deal with this disaster. Help can be given for draining the water. Municipal bodies open the storm</p> |

water drains in such cases. With the help of elders, we shall spread the message of warning in such places. We will not play in the clogged water, but will help the people who are in need.

4. We shall help the people who are in need.

