

10. Disaster Management

Q.1. Choose the correct option and fill in the blanks.

(Drought, 1976, 13th October, natural, 13 July)

- (i) is international Day for disaster reduction.
- (ii) National flood commission is established in by government of india.
- (iii) A volcano is a event or phenomenon.
- (iv) is the main cause of famine.

Answers : (i) 13th October (ii) 1976 (iii) natural (iv) Drought

Q.2. Find the odd man out.

- (a) Famine, earthquake, cloudburst, railway accident.
- (b) Drought, heavy rains, storm, tsunami.
- (c) Lava, hot mud, ash, locusts.
- (d) Washing away of crops, attack of pests on crops, volcano, singeing of crops,

Ans:

(a) Railway accident (All others are natural calamities)

(b) **Drought** (It is a dry spell, the rest are associated with water)

(c) **Locusts** (All others are associated with volcanic eruptions)

(d) **Volcano** (All others are associated with farm)

Q.3 Write answers to the following questions.

(1) What is disaster ? What are types of disasters ?

Ans : Disaster is a sudden accident or a natural tragedy that causes great damage or loss of life. There are two types of disasters (i) Manmade disaster (ii) Natural disasters

(2) What is a famine ? Give two causes of famine?

Ans : The condition that arises due to long term and severe scarcity of foodgrains and water is called famine.

(i) Drought is the main cause. Drought means total lack of rains or very insufficient rains.

(ii) The heavy rains and floods. Crops are washed away or damaged in the floods.

(iii) The environmental changes such as temperature change, storms, cold waves or fog, damage of crops.

(iv) By animals like mice and rats, attack of pests, locusts or diseases of crops.

(v) A natural calamity like earthquake, etc. are some of the causes of famine.

(3) What is volcano ?

Ans : A volcano is a natural event or phenomenon. The interior of the earth is very hot. Movement of hot substances continuously occur from the interior towards the surface of the earth. As a result, sometimes the solid, liquid and gaseous substances below the earth's crust are pushed towards the crust. When these substances come out of the earth's crust in an eruption and start flowing, it is called a volcano.

(4) What are the destructive effects of tsunami ?

Ans :

- i) Boats and ships near the coast get damaged.
- ii) There is large scale loss of life and financial loss.
- iii) Buildings and other constructions are destroyed.
- iv) Trees get uprooted. Landslides take place on a large scale.
- v) Changes take place in the original land near the coast giving rise to swamps.

vi) Traffic obstructions arise.

vii) The business/ industry related to the sea are adversely affected and normal day-to-day life is disrupted.

viii) Large scale damage is caused to harbours.

2.What are the remedial measures for the following calamities ?

(a) famine :

Ans : (1) Water should be used judiciously and with care. Proper water management should be done. (2) Reusing the water. (3) Construction of check dams and water harvesting techniques to be adopted at local level. (4) Prevention of tree felling and planting trees in a very large scale. If deforestation is stopped, it will help in holding more water in the ground and also prevent soil erosion. (5) Since the impacts of climate change are seen everywhere, we must plan the food and water supplies.

(b) Lightning strike :

Ans : (1) One should stay at home when there is thundering and lightening (2) One should not take shelter under a tree, on the heights, or in open ground as there is higher change of lightening sticking here. (3) One should not stand near an

electric pole, a telephone pole, a tower etc. (4) Not to get into water for swimming. (5) Install a lightning conductor on the top of one's building.

(c) Storm

Ans : (1) During stormy rain, the trees may fall down due to strong winds. Hence trees are to be trimmed to avoid any injury. (2) One should take shelter in a safe place. Our whereabouts have to be informed to our family and friends. (3) The electric supply should be stopped in order to avoid any accidents. (4) Other people should be helped if they need any shelter. (5) Listening to the radio or any media for the instructions about storms and following the same is very important for safety. People can be relocated and saved from storm which is due to come.

(d) Cloudburst :

Ans : (1) In the event of cloud bursting there is severe rainfall. Therefore, we must move to the safe place. (2) One should not take shelter at the foothill, near river banks or near sea coast. It may be dangerous to wait at such places. (3) We should move to safe places and also help others to go to safe place.

3. True or false ? Give reasons for your answer.

- (a) Information about a forthcoming storm is to be kept secret.
- (b) You should not swim when there is lightning in the sky.
- (c) It is possible to prevent the eruption of a volcano.
- (d) Heavy rains result in famine.

Ans : (1) **False** : The information about forthcoming storm should be given to the people who may get effected. This can save their lives.

(2) **True** : The electric current from the lightening can enter the water easily and be very hazardous for a person who is swimming. This can even cost his life.

(3) **False** : Volcanic eruption is a natural disaster which may happen anything. There is no technology that can stop calamity.

(4) **True** : Heavy rains may wash away the crops and cause damage to the farm lands. This is called a wet famine.

4. Write answers to the following questions in your own words.

(a) What is a tsunami ? What given rise to a tsunami ?

Ans : (i) 'Tsunami' is a Japanese word which means 'harbour wave'. A wave is generated by an earthquake or volcano occurring on the ocean floor is called a 'tsunami'

(ii) If an earthquake occurs at the bottom of ocean then the energy released and the water pushes upwards. This results in a peculiar type of waves being formed.

(iii) These waves are not very high near the source, but they spread very fast over long distances.

(iv) The velocity of these waves is 800 to 900 kilometres per hour.

(v) When they reach a coastal area, their velocity is reduced, but their height is increased tremendously to about 30 metres. This causes a great damage.

(b) What is a cloudburst?

Ans : (i) The cloud bursting means the excessive rainfall suddenly pouring in a short span of time in a specific area.

(ii) Due to very high temperature near the land, the water coming down from rain clouds does not reach the land in the form of rain. But it vaporizes and goes back into the same clouds.

(iii) This causes the amount of vapour in those clouds becomes very high.

(iv) Due to rapid condensation, it rains suddenly over a specific and small region at a rate of 100 mm per hour or more. This is known as a cloudburst.

(c) Explain the effects of a volcano.

Ans : (i) The chemical substances such as lava, vapour, hot mud, sulphur, etc. get collected on the surface of the earth and thereby mountains and hills are created.

(ii) The atmosphere gets polluted due to the ash and gases ejected by the volcano.

(iii) Often, it rains as a result of a volcanic eruption.

(iv) Temperature rises due to hot gases.

(v) Forests and settlements get buried under the hot mud.

(d) What are the measures to prevent loss of life due to lightning ?

Ans :

(i) Do not stand on open ground or below a tree.

(ii) Do not go to a high location or climb a tree.

(iii) Do not stand near an electric pole, a telephone pole, a tower, etc.

(iv) Stay at home when there is thundering and lightening.

(v) Do not go into water for swimming .

(vi) A lightning conductor is fitted in the top of one's building.

5. What measures have been taken to deal with calamities such as floods and landslides under the disaster management programme in Maharashtra ?

Ans : (1) Government of Maharashtra has been established Disaster management Cell to protect the life and property of people of Maharashtra. (2) The people are given warning about the storms, earthquakes or floods, from this cell in Advance.(3) Government of India established the National Flood Commission in 1976. The Commission has made special efforts towards the control of floods. A plan regarding flood control is kept ready from national level to village level. (4) Executing this plan to stop the large scale damage of property and loss of life can be avoided because of this plan. (5) If there are loss of houses due to landslides or cloudburst, then government provides shelter homes for the people. (6) The

people giving all the kind of help to citizens during calamities.

6. With reference to disaster management what are the things in your house that you will check ?

Ans : (i) avoid wastage of water (ii) avoid wastage of food (iii) avoid wastage of electricity. (iv) fix lightning conductor on the roof top. (v) keep in touch with weather forecasts. (vi) during thunderstorms avoid the use of plugged in electrical appliances and mobile or telephone. shut valves of gas regulators. (vii) Regularly trim trees of branches that are likely to cause damage to our house.

7. Who does what for disaster management?

Ans : United nations established a standing international organization in 1965.

About 177 nations from all over the world are members of the UNDP.

This organization helps during disasters by sending equipment, financial aid, volunteers, international medical teams and groups of other experts to the place of the disaster.

8. Explain Floods :

Ans : During floods, water is accumulated at one place in a very large amount. This is caused due to heavy rainfall. The river may also overflow and spread its water along the banks.

Effects of flood : Huge loss to life and property. The excessive rain water cannot be drained due to choking of drain pipes.

Transportation and electric supply gets halted.

Soil erosion takes place resulting into damage to farms and crops. Cattle lose their life.

The epidemics spread and harm the health of the people after the flood water recede.

9. Explain Volcano :

Ans : A volcanic eruption is a natural phenomenon in which the solid, liquid and gaseous substances below the earth's crust which are very hot are pushed towards the crust. When they come out of the crust it results into an eruption causing great damage.

Effects of a volcano : The molten lava, vapour, hot mud, sulphur, etc . are collected on the surface of the earth forming mountains and hill.

The air pollution occurs due to ash and gases ejected by the volcano. It often rains due to effect of volcanic eruption.

The hot gases that are emitted out, raise the temperature. Settlements and forests may get buried under the hot mud.

Volcanoes erupt in the sea too, causing formation of an island. this may form upheaval of water and creation of huge waves.

10. Is it possible to prevent the loss of life caused by lightning?

Ans : the loss of life cannot be precented if it is caused by lightening. But if there is thunderstorm with lightning, one must be careful. He or she should not leave house, take shelter with due precautions.