

Std.: 10 (English)

Science - II

Chapter: 10

Q.1 Multiple Choice Questions

1

- 1 The disaster management act was passed in India in the year:
(a) 2002 (b) 2004 (c) 2005 (d) 2007

Ans Option (c)

Q.2 Name the following

9

- 1 Explain the meaning of following symbols



Ans Risk of Explosion

- 2 Explain the meaning of following symbols.



Ans Oxidant Material

- 3 Explain the meaning of following symbols.



Ans Environmentally hazardous

- 4 Explain the meaning of following symbols.



Ans Toxic

- 5 Explain the meaning of following symbols.



Ans Health Hazard

- 6 Explain the meaning of following symbols.



Ans Dangerous or corrosive acid.

- 7 Explain the meaning of following symbols:



Ans Compressed Gas

- 8 Explain the meaning of following symbols.



Ans Generic Danger

- 9 Explain the meaning of following symbols.



Ans Danger highly flammable.

Q.3 Give scientific reasons

- 1 Effective disaster management makes us well prepared for future.

- Ans**
- Disaster management involves achieving the abilities to face disasters in the future.
 - It involves planning to minimize the losses due to disasters.
 - Improvement in the ability to face disasters is achieved time to time through scientific and careful observations and data analysis.
 - Hence, it is said that effective disaster management makes us well prepared for future.

2 Increase in human disasters after the World War-II ?

- Ans**
- After World War II, ever increasing human population and their increasing needs have put burden on limited resources.
 - As a result situations like economic inequality, racial and religious differences, social differences arose which gave rise to instability.
 - This is the reason for increase in human disasters like war, Incidences of terrorism, riots, abduction etc.
 - These are on rise in these days.

3 It is essential to get the training of first aid.

- Ans**
- Training of First aid can be of great use especially at the face of disaster.
 - A trained person can work in right direction towards saving life, relieving the pain and preventing deterioration of condition of victims of disaster.
 - In the absence of knowledge one might not be able to save or relieve the victim even if he intends to do so, infact can also harm the victim.

Q.4 Write Short Notes on

10

1 Nature of disaster management.

- Ans**
- Disaster management is used to overcome disasters of any kind. e.g. minor or major, short-time or long-time.
 - A close relationship between disaster management and public participation exist.
 - Disasters are never planned but losses due to them can be minimized in a planned manner by disaster management.
 - Disaster Management involves making arrangements to face disasters or at least achieving the abilities to face them.
 - The improvement in ability to face disasters is achieved through scientific and careful observation and data analysis.

2 Disaster Management Act, 2005.

- Ans**
- The Disaster Management Act has been enacted in the year 2005 for controlling the disasters in the country.
 - As per the Disaster Management Act, disaster management authorities have been set-up at different levels - National, State, District, Taluka, Village.
 - The national Disaster Response Force has been established as per the Disaster Management Act, 2005.
 - The personnel of National Disaster Response Force make substantial contributions in rescue work in disasters like cyclones, building collapse, cliff-sliding, etc.

3 Mock drills.

- Ans**
- It is a practice to check the preparedness of facing the disaster as early as possible. Virtual/Apparent situation of disaster is created to check the reaction time for any type of disaster. Trained personnel observe their responsibilities to check execution of plan designed for disaster redressal. This helps to check the efficacy of the system prepared for disaster redressal. Mock drill is arranged on disaster of fire in various schools by the fire fighters. It includes the demonstrations like extinguishing the fire, rescuing the people trapped at higher floors of buildings, rescuing the persons whose cloths catch fire, etc. Such activities are also arranged by police force and voluntary organizations.

4 Disaster Management Authority.

- Ans**
- The Disaster Management Authority has been established at the Government level for controlling disasters.
 - The function of control and coordination under Disaster Management takes place from national to village level.

Name of Authority	Chairman
National Disaster Management Authority	Prime Minister

State Disaster Management Authority	Chief Minister
District Disaster Management	Collector
Taluka Disaster Management Authority	Tahsildar
Village Level Committee	Sarpanch

iii. The National, State and District Disaster Management Authorities provide precautionary warning about disasters.

iv. The District, Taluka and Village level authorities form the system involved in actual rescue and rehabilitation work.

5 Disaster and its management.

- Ans**
- i. A disaster is a destructive event that occurs suddenly and involves loss of life and property.
 - ii. Disasters can be of two types, natural and man-made. It is a sudden accident or a natural catastrophe that causes great damage or loss of life.
 - iii. Disaster Management refers to the measures taken for the safety and protection of life and property from natural or man-made disasters.
 - iv. Disasters are never planned but losses due to them can be prevented in a planned manner.
 - v. This means being prepared for disasters, fighting disasters effectively, ensuring the safety of life during disasters and helping in rebuilding society after the disaster.
 - vi. When a disaster strikes a society, external help is usually needed in the form of aid to cope with its impact.
 - vii. Increasing awareness about disaster management among the general public through training programs, mass media etc. will enable them to be always prepared for disaster rescue.

Q.5 Write properties/characteristics/uses/advantage/effects.

1 Write the effects of drought.

Ans Effects:

i.	Decreased in the production of food grains.
ii.	Destruction of farms.
iii.	The livelihood of people is affected.
iv.	Losses or destruction of fish and wildlife habitat.

2 Objectives of disasters management.

OR

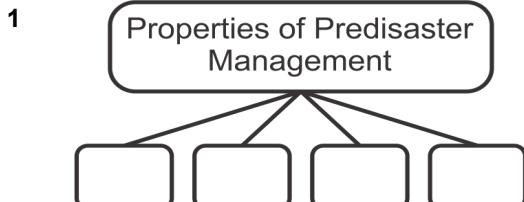
Which are the objectives of disaster management?

OR

State any four objectives of disaster management.

- Ans**
- i. Disposal of human life suffered by human being during the calamity and release of the people.
 - ii. Supply of essential commodities of the people to reduce the effect of disaster.
 - iii. The restore the human life in the region by creating reconciliation in disaster.
 - iv. Rehabitant disaster victims.
 - vi. Considering protective measure in disaster, such disaster will not reach in future and slop take care to reduce their intensity.

Q.6 Complete the given flow chart / table



4

2

Ans

Properties of Predisaster Management



Collecting the information about intensity of disaster and probable sites of disasters.

Getting special training for disaster management.

Increasing awareness about disaster management among the general public.

Q.7

Write Distinguish between

2

- 1 Pre- disaster management and Post-disaster management.

Ans

	Pre- disaster	Post-disaster
i.	It comes into action even before the disaster occurs to prevent the loss from coming event predicted.	It comes into action after the disaster has taken place.
ii.	The pre-disaster area is uncertain.	The disaster area is certain after occurrence.
iii.	It includes precaution and prevention method for the predicted disaster.	It includes quick actions, medical facilities,etc. for the victims of the occurred disaster.
iv.	It has different preparatory events as Mock drills to be alert regarding the disaster foreseen.	It includes various phases as emergency phase, rehabilitation phase, reconstruction phase, etc. to overcome the loss in the disaster.

Q.8

Give explanation using the given statements.

3

- 1 Explain the role of District Disaster Control Unit after occurrence of any disaster.

Ans i. District Disaster Control Unit is established immediately, either after the impact of disaster or after getting an intimation about the disaster.
ii. It reviews all aspects of the disaster and secures help through continuous contact with various agencies, e.g. army, air force, navy, telecommunication department, paramilitary forces, etc.
iii. It coordinates with voluntary organisations for their help in disaster management.

Q.9

Suggest remedies / measures

6

- 1 State the remedies of motor accident and land sliding.

Ans Motor Accident Remedies:-

- a. Following the traffic signals.
- b. Do not drink and drive.
- c. Do not talk on mobiles while driving.

Land Sliding Remedies:-

- a. Increase in vegetation cover.
- b. Planting trees on slopes.
- c. Afforestation
- d. Cutting of trees should be avoided.
- e. Natural water streams should not be obstructed during construction.

- 2 Write remedies for drought.

Ans Remedies:-

i.	Water conservation and storage.
ii.	Taking measures to prevent air and water pollution.
iii.	Rainwater harvesting.
iv.	Nations must limit the amount of greenhouse gases emitted into the Earth's atmosphere.
v.	Interlinking of national water resources (rivers). Water management can be much better that way.
vi.	Dams and other water storage mechanism need to be in place.

Q.10 Complete the table/ web/ flow chart 3

1 Identify the type of disaster

	Disaster	Type
a.	Terrorism	
b.	Soil erosion	
c.	Hepatitis	
d.	Forest Fire	
e.	Famine	
f.	Theft	

	Disaster	Type
a.	Terrorism	International disaster (Man - made)
b.	Soil erosion	Geological disaster (Natural)
c.	Hepatitis	Biological disaster (Natural)
d.	Forest Fire	Biological disaster
e.	Famine	Atmospheric disaster (Natural)
f.	Theft	Man - made disaster

Q.11 Write answers based on given diagram/ figure 36

1 Following are pictures of some disasters. How will be your pre-disaster and postdisaster management in case you face any of these disasters?



Ans This picture depicts the disaster of flooding due to heavy rains.

Pre-disaster management:

- i. I will contact the town planning department to find out if my home is located in a flood-prone area.
- ii. I will examine the residential area and find the route to escape in case of flooding emergency.
- iii. I will collect emergency contact numbers and ask all family members to save them so that they are readily available when need arises.
- iv. I will buy non-perishable food items and store potable water which will be sufficient at least for 2-3 days.
- v. I will keep first aid kit ready at home.
- vi. I will also ask my neighbours to take these precautionary measures.

Post-disaster management:

- i. I will provide food, water, and medical help to victims.

- ii. I will ask people to drink only boiled water to avoid waterborne diseases.
- 2 Following are pictures of some disasters. How will be your pre-disaster and postdisaster management in case you face any of these disasters?



Ans Pre-disaster management:

- I will identify if my area is located in cyclone-prone area.
- I will ask my family members and neighbours to stay indoors, in case there is a possibility of a cyclone.
- I will keep the necessary stock of food, medicines, and other essentials.
- I will keep myself updated about news related to cyclone.
- I will keep emergency kit nearby.

Post-disaster management:

- I will provide necessary help such as food, water, and medical help to the affected people.
- I will switch off all electric appliances.

- 3 Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



- Ans** i. This symbol signifies a cancer-causing agent (carcinogen) or substance with respiratory, reproductive, or organ toxicity that causes damage over time (a chronic or long-term health hazard).
- ii. If one ignores this symbol and swallows such a substance, his/her internal organs may suffer damage.
- iii. It may cause allergy or asthmatic symptoms.

- 4 Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



- Ans** i. This symbol signifies gas under pressure.
- ii. A cylinder carrying such a gas may explode, if heated.
- iii. If such a cylinder is heated unknowingly, it can cause cryogenic burns or injury to people handling it as the cylinder may contain refrigerated gas.

- 5 Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



- Ans** i. The symbol signifies that the substance is hazardous to environment.
ii. Such a substance may harm or kill native species, including aquatic species, trees, and plants.
iii. If a substance with this sign is thrown into a lake, it can harm or kill fish, aquatic plants, and other aquatic animals in the lake.
- 6 Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



- Ans** i. This symbol signifies corrosive chemicals.
ii. When materials with this symbol come in contact with the human body, they can attack and chemically destroy exposed body tissues.
iii. They can cause skin burns and eye damage.
iv. They can damage metals.
- 7 Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



Prism
Colours of your Dreams

- Ans** i. This symbol signifies chemicals that ignite very easily.
ii. One should wear eye protection when handling these chemicals. These chemicals should be kept away from flames and sparks, and also from oxidizing substances.
iii. If this symbol is ignored, and such a substance is handled carelessly, it may cause fire.
- 8 Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



- Ans** i. This symbol signifies oxidizing substances.
ii. Some substances do not burn themselves, but they provide oxygen for flammable substances to burn. Such substances are labelled with the 'oxidizing' symbol. They should be kept away from flammable substances and ignition sources.
iii. If this symbol is ignored and a substance with this symbol is kept near fire, it will enhance the fire and cause serious accident. It will be very difficult to control such fire.
- 9 Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



- Ans** i. This symbol signifies hazardous or dangerous materials, locations, or objects, including electric currents, poisons, and radioactive materials.
- ii. Ignoring it may lead to death. Example: If one ignores this symbol and touches a high-voltage wire, he/she will get electrocuted and die.
- iii. Similarly, if one drinks a substance having this symbol, he/she may die as it may be poisonous or radioactive.

- 10** Following are pictures of some disasters. How will be your pre-disaster and postdisaster management in case you face any of these disasters?



- Ans** This picture depicts the disaster of leakage of cooking gas from a gas cylinder.

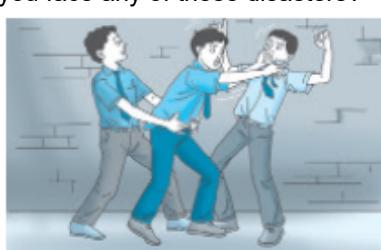
Pre-disaster management:

- After using the gas stove, I will turn off the gas knob.
- I will check to ensure that there is no inflammable substance near the gas cylinder.
- Once a year, I will get the tubing checked by the gas supplier.
I will ask them to replace the tube if it is damaged.
- I will keep the gas cylinder upright.
- I will train my family about what to do in case of a gas leakage.

Post-disaster management:

- I will cover my mouth with a handkerchief so that I don't inhale the gas.
- I will close the gas valve and open the windows and doors.
- I will move out of the place if the leakage is severe.
- I will warn neighbours not to switch on / switch off lights or do anything that will create a spark.
- I will call the helpline from a landline number.

- 11** Following are pictures of some disasters. How will be your pre-disaster and postdisaster management in case you face any of these disasters?



- Ans** The disaster depicted in this picture is fighting between children.

Pre-disaster management:

- If two students have a conflict about any situation or subject, I will try to peacefully resolve it.
- If they fight, I will try to stop the fight and separate them.
- If that is not possible, I will inform the teacher. The teacher will counsel them.

Post-disaster management:

- I will provide first aid if anybody is injured.
- I will evaluate the situation and find out the cause of the fight and make them aware of their mistake.

- With the help of my friends, I will make them understand why it is wrong to start a fight and explain them
the importance of friendship.
- i. With the help of my friends, I will make them understand why it is wrong to start a fight and explain them
the importance of friendship.
- iv. I will take them to one side and redirect their attention to an activity they enjoy.
- v. I will counsel both – the victim and the bully.
- 12** Some symbols are given below. Explain those symbols. Which disasters may occur if those symbols are ignored?



- Ans** i. Symbol indicates irritant substance.
ii. These substances cause irritation of the skin.
iii. If consumed, they can burn the respiratory tract.
iv. They can cause irritation if handled negligently, ignoring the symbol. They may cause toxicity if inhaled or swallowed.

Q.12 Answer the following

- 1** Explain why it is said like that.
Mock drill is useful.

- Ans** (1) A mock drill is a practice to check the preparedness for facing a disaster in the shortest possible time.
(2) It helps to evaluate the response to the disaster and improve the coordination between various departments of disaster control.
(3) It helps to check effectiveness of the planned actions. It also helps to identify possible risks and errors.
(4) It helps to ensure quick and safe escape, avoid panic and confusion, and reduce the number of accidents and injuries.
(5) Hence, it is said that mock drill is useful.

- 2** Why is it essential to get the training of first aid? Or First aid training is essential. Why?

- Ans** i. We face different types of major or minor disasters in our daily life. Disasters like accidents, stampedes, electric shock, burns, fire due to electric short circuit, and epidemic of a disease can happen anytime.
ii. Victims of such disasters need to be offered some primary help or first aid immediately, before the actual medical treatment is offered.
iii. A person trained in first aid can save someone's life or his/her life in case of a disaster.
iv. The main objective of first aid is prevention of death, preventing deterioration of health, and starting the process of rehabilitation.
v. Hence, it is essential to get training of first aid.

Q.13 Answer the following in detail

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

6

25

Awareness Generation Team		
Warning and Information Dissemination Group		
Disaster Response Group		
Evacuation Team	First Aid Team	
Site Safety Team	Fire Safety Team	
Search and Rescue Team	Bus Safety Team	

Awareness Generation Team	Comprising of Principal, Vice-Principal and HOD.
Warning and Information Dissemination Group	Comprises of two teachers
Disaster Response Group	
Evacuation Team	First Aid Team
Includes one person each from NCC, Scouts, NSS, class monitor.	Scouts teacher, NCC student head, class teachers.
Site Safety Team	Fire Safety Team
Two teachers, class monitors, school captains	Students (IX, X divisions), Teachers.
Search and Rescue Team	Bus Safety Team
School captains, Class monitors, Scout and NCC participants.	Two teachers, bus staff.

2 Explain why it is said like that.

Effective disaster management makes us well prepared for the future.

Ans (1) Effective disaster management is the method of providing the technology, tools, and practices that enable disaster response organizations to get information and hence, effectively assist survivors, reduce the amount of damage caused, and help the communities to rebuild.

(2) Being prepared for the disaster can avoid a lot of problems.

(3) A prompt warning to people to evacuate and take shelter in a safe place can save lives.

(4) Information and contact details of public emergency services like fire station, police, and other services that provide help to disaster victims should be readily available.

(5) First aid offers timely help to disaster victims.

(6) Disaster management enables people to take timely action and thus prevents a huge loss of life and property.

Thus, a well-planned, effective disaster management setup – established across different levels such as schools, offices, and public places – makes us well prepared for the future and safeguard our life and property from a disaster.

3 Give reasons for increase in human disasters after World War-II.

Ans The World War-II was a manmade disaster. Human disasters increased after World War-II due to the following reasons:

- The World War-II had long-lasting adverse effects on global economy, The warring superpowers tried to be superior to each other, creating natural and economic imbalance between nations.
- Increasing population led to increased demand to meet the basic needs.
- Economic inequality, racial and religious differences, and indiscriminate use of resources, led to conditions of instability.

- iv. The insecurity created by war prompted developing and poor countries to produce harmful chemicals and explosives that could wipe out the human race. Development of atomic plants led to problems related to handling of radioactive materials and emission of harmful radiations.
- v. Displacement or forced migration of civilians and soldiers during or after the war greatly affected them socially and emotionally.
- vi. Children were the worst sufferers as they lost their parents or got separated from their families. Many suffered from disabilities, and illnesses leading to psychological suffering and trauma. There was also increase in child labour and juvenile crimes.
- vii. More women came out of their traditional roles as homemakers and started working to earn a living as they had lost their husband or father in the war. Many of them had to face inequality, discrimination, and sexual violence.
- viii. Thus, global instability, wars or conflicts between nations, incidences of violence, crimes, terrorism and unrest among people, in general, increased after World War II.

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

Ans (1) Flooding – Mumbai is known for heavy rains. Sudden heavy rains can cause a lot of problems. If there is high tide along with heavy rains, the situation worsens. Twice in the past, we faced this problem, when the roads suddenly started flooding.

Reasons: Flooding happened mainly because of cloudburst accompanied by high tide. Other factors include illegal constructions, destruction of mangroves, blocking pathway of river to build houses and other structures, blockage of canals by plastic bags, etc.

Effects: Flooding caused a lot of damage, loss of human and animal life, and spread of diseases like leptospirosis and cholera. Many people were stranded for two nights in buses, on roads, and unknown places. Electricity was cut off for a few days. Remedial measures taken Immediate rescue operations were carried out. People offered food, water, and shelter to those affected. Many disaster management units were set up to deal with the situation.

(2) Sudden fire: Sudden fires have occurred in various places in the recent past. Recently, a fire broke out suddenly

in one of the well-known restaurants, in which a few people lost their lives.

Reasons: The restaurant was not equipped to handle fire situation. It did not have fire safety system in place; inflammable and hazardous substances were not properly stored. Employees were not aware of how to handle the situation.

Effects: The fire caused heavy loss of property and life. People were trapped inside the restaurant. About 13 people died. Some of them died due to choking by smoke, and not due to fire burns. Many suffered serious burns.

Remedial measures: Fire engines, water tankers, and ambulances were rushed to the site. Fire brigade and local police rescued people trapped inside the restaurant. Injured and burnt people were carried to the hospital by ambulance.

5 Which different aspects of disaster management would you check for your school? Why?

Ans Important aspects of disaster management we would have to look into for our school are:

- (1) **Preparation:** Everyone in the school should be prepared for any disaster as disasters can happen anywhere. For this, proper training should be imparted.
- (2) **Redemption:** In case of a disaster, the damage to school property could be minimized by proper planning.
- (3) **Preparedness:** The school management should chalk out a plan, so as to get a quick response from all in the school. The first aid kit should be always ready, well equipped, and easily accessible. A squad should be prepared to immediately execute the plan of evacuation and rescue operations. Also, through mock drills, students should be trained to follow the plan. A team of students should be trained to carry victims to the ambulance.
- (4) **Response:** The trained squad and students should immediately get into action. First aid should be provided to the victims.
- (5) **Resurgence:** Resurgence is an important link between the emergency and further progress. It involves planning for the rehabilitation of victims.
- (6) **Restoration:** Getting things back into shape is very important once everything is settled down. This is restoration. If any disaster happens, victims will be affected physically and

mentally. School should have contact details of organizations who carry out counselling of students. Counselling will help to heal mentally.

Our school must follow the above aspects to be completely prepared for any disaster.

