

## Chapter 11

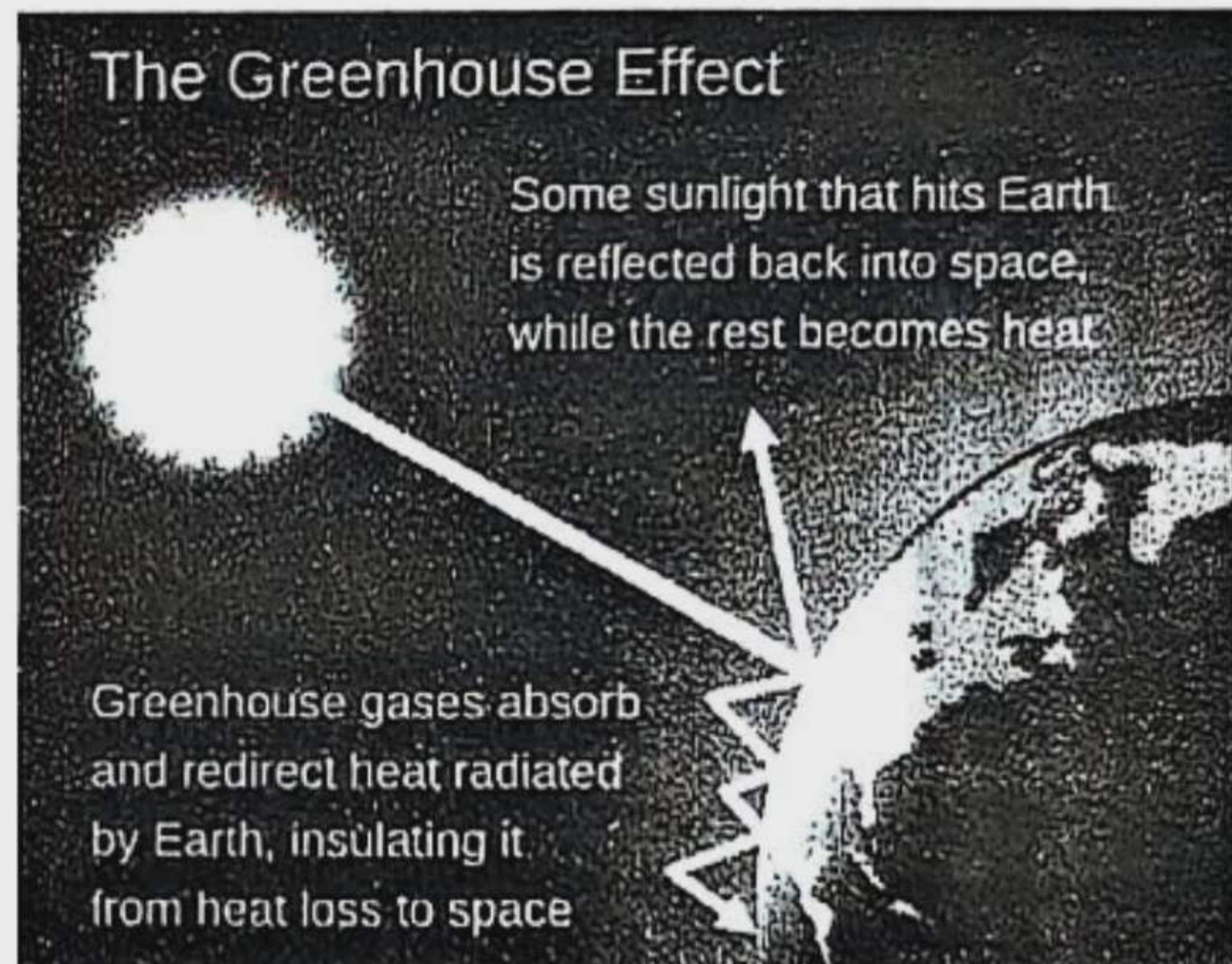
# Climate and Natural Disasters in Bangladesh

### Contents for Discussion

- The concept of global warming • The causes of global warming • The concept and kinds of disaster
- Different kinds of natural disasters • Causes of Natural Disaster • The Impacts of Natural Disasters on Life and Economy of Bangladesh • Duties and responsibilities during natural disasters.

### Learning Outcomes : After studying this chapter I will be able to—

- explain the idea of global warming;
- analyze the causes and effects of global warming;
- explain disaster;
- mention the types of disasters;
- describe different types of natural disasters like cyclone, flood, drought, earthquake, tsunami, fire-accident etc;
- narrate the causes of natural disasters of Bangladesh;
- analyze the impacts of these disasters on the life and economy of Bangladesh;
- give advice and make a plan to prevent natural disasters, to undertake necessary steps to save life and assets from disasters;
- be aware of environment.



### Practice



Multiple Choice, Short & Creative Q/A  
following 100% accurate format for best prep.

Dear learners, the Q/A of this chapter have been divided into exercise, multiple choice, short, creative & exercise-based activities in light of the learning outcomes. Practice the questions well to ensure the best preparation in the exam.



### Textual Q/A



### Let's learn the textbook Q/A



### MCQs with Answers

1. The causes of natural disasters in Bangladesh are—
  - i. geographical position
  - ii. climate
  - iii. soil structure, canals and rivers.

Which one of the following is true?

(d) ① i & ii   ② ii & iii   ③ i & iii   ④ i, ii & iii
2. What happens as a result of the use of luxury goods in our daily life?
  - i. increase of man-made HCFC gas.
  - ii. production of greenhouse gas.
  - iii. it has become easier to live in comfort and happiness.

Which one of the following is true?

(a) ① i & ii   ② i & iii   ③ ii & iii   ④ i, ii & iii

### Read the stem below and answer the questions 3 and 4 :

The students of Karimganj High School go on a picnic to Modhupur. There they saw some persons cutting wood in the forest violating laws.

### 3. Which disaster is directly indicated in the stem?

- ① greenhouse gas   ② deforestation  
③ ozone layer   ④ temperature rise

### 4. The effects of the disaster are—

- i. the amount of carbon-di-oxide increases.
- ii. electric supply is disrupted.
- iii. canals and marshes dry up.

### Which of the following is true?

- (a) ① i   ② ii   ③ i & ii   ④ i & iii



## Creative Questions with Answers

**Ques. 01** Event-1: Yesterday Rifat came to know from TV news that an accident occurred in the 11th and 12th floor of a renowned shopping mall. Several shops were damaged. Many people died and got injured in the accident. The members of a particular force came and brought the incident in control.

Event-2: Entire Nepal as well as Bangladesh shivered at the same time at 11:56 am on 2nd April, 2015. Many houses were damaged at this. Many people were killed and injured. If we become a bit cautious, we may minimize the losses.

- a. What is the name of the gas that erodes the ozone layer of the atmosphere? 1
- b. What do you mean by 'greenhouse effect'? 2
- c. Explain the causes of disaster in event-1. 3
- d. What steps can you take to reduce losses in the disaster described in event-2? Give your opinion. 4

### Answer to Question No. 01 :

a The name of the gas that erodes the Ozone layer of the atmosphere is Hydro Chloro Fluoro Carbon (HCFC).

b When global warming increases due to the increase of green house gas is called 'green house effect'. Green house is a kind of covering made of different types of gases. It works as heat maximiser. It creates a kind of covering or shield around the world. Green house gas forms a layer around the globe. This layer absorbs heat from the sun and then scatters it on the surface of the globe. Thus the heat of the world increases. This increasing heat is known as global warming and this process of global warming is called green house effect.

c In the stem, the mentioned disaster in event-1 is a disaster of fire.

Fire may take place as a natural disaster as well as a disaster caused by carelessness or an accident. Sometimes fire takes place at forests in many countries because of immense heat. It's called wildfire. It destroys forest resources as well as biodiversity. Wildfire does not take place in our country. So we do not consider fire as a natural disaster. In Bangladesh, fire takes place due to carelessness or as an accident. This accident usually takes place in mills and factories, oil refineries, garments industries, jute mills, chemical godowns, residential buildings, shops, offices, and commercial centres. It is to note here that both in the rural and urban areas lack of consciousness is a prime factor for fire and often the sources of fire

are burning ovens, lamps, mosquito coils, cigarettes, and hurricanes (kerosene lamps) etc.

d The mentioned disaster in event-2 of the stem is earthquake. The steps which we can take to minimize the losses which we can to minimize the losses of life and property are described below : Every house should have an emergency exit other than the main entrance. Moreover, there should be some first aid items, few helmets, and a torch light at each family. A strong table should be kept at each house to take shelter underneath during the earthquake. Heavy furniture should be kept on the floor. All electric and gas connections should be switched off after use.

During earthquake we should take shelter beneath a strong table or any strong furniture. All electric and gas connections should be switched off immediately. If there is sufficient open space beside the homestead, shelter should be taken there immediately. Commuters should ask drivers to stop vehicles instantly. We must not use any lift during this time.

After the earthquake is over, we should take injured persons to the nearest hospitals for treatment. We should do the best to participate in the rescue work. Measures should be taken to ensure temporary shelters, foods, and water for the distressed people.

So it can be said if we can take the above steps then we will be able to minimize the losses of life and poverty in some extent.

**Ques. 02** The village of Sajid stands on the bank of the river Dhaleswari. In the morning he went to the playground and saw the river full with water to the brim. But in the afternoon people were running to and fro. They were taking their cattle and goods elsewhere. They were taking extra preparation to preserve crops. Seeing all these he realized that they have to leave the village now too. Sajid's family members were worried about his grandmother and his three-year old younger sister.

- a. What is greenhouse gas? 1
- b. Why does landslide occur? 2
- c. What disaster has attacked Sajid's village? Explain. 3
- d. Determine the effects of the disaster on Sajid's family. 4

### Answer to Question No. 02 :

a The main elements of the air are nitrogen and oxygen. Besides, a little amount of carbon-dioxide, methane and nitrous oxide are also available in the air along with some vapour and Ozone gas. These less important gases are called greenhouse gas. Apart from these a few man-made gases such as CFC, HCFC and Halon are also called greenhouse gas.



**b** The sudden fall of a mass of earth from a hill or mountain is called landslide or landfall. Hills composed of sand stones or heavy mud may have landslide during intense rain or long time rain. It also takes place for massive deforestation and leveling of hills. Landslide cause problems for the people who live beneath the hills as their houses can be buried down for this. This problem is very common in Chittagong, Cox's Bazar, Bandarban, Sylhet, Netrokona, and some other districts of Bangladesh. Here many lives are lost and many houses are destroyed due to this problem every year.

**c** Sajid's village has been attacked by river erosion. It is one of the main natural disasters of Bangladesh.

Bangladesh is a riverine country. This country is criss-crossed by innumerable rivers. So river erosion is very frequent here.

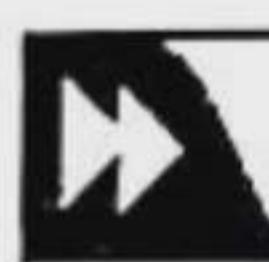
In the stem the crisis has erupted over the Dhaleswari river.

The person of Sajid's village has become busy to take their cattle and goods elsewhere. They have also taken extra preparation to preserve crops. As the village stands on the bank of the river Dhaleswari and it is full with water to the brim.

So, the risk of river erosion is the main cause of their preparation. Taking preparation to protect life and property is a part of dealing against river erosion. If there is found any kind of risk of river erosion then there is no way but leave houses. The family of Sajid also has taken preparation to leave the village.

**d** Mentioned disaster in the stem is river erosion which has a negative impact on Sajid's family. When any kind of disaster occurs then crops, asset and life are destroyed and environment is damaged also. The result of river erosion is also the same. Because of river erosion extensive damage to property happens. Specially people become homeless and shelter less because of this disaster. Sajid's family will have to leave the village because their lands, houses including all assets will be grabbed by the river because of river erosion. As a result they will face extreme damage and uncertainty. Now they have to search for new shelter so they are worried about the child and old member of the family. Because of river erosion Sajid's family also economically affected which has lowered the standard of their living.

At last we can say that the family of Sajid has been the victims of tragic situation of river erosion.



## Multiple Choice Q/A



## Designed as per topic

### The concept of global warming

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1. What do you mean by "Greenhouse effect"?
  - A house of green
  - One kind of gas
  - Green cover
  - A kind of covering made of different types of gas
2. Which is called heat miser gas? [BB '19]
  - Carbon-di-oxide
  - Methane
  - Green house gas
  - Nitrogen
3. Biodiversity means, in nature the living beings—. [DB '17]
  - achievement of longevity
  - getting short life
  - way of survival
  - extinction
4. Which is the main reason of climate change? [SB '17]
  - Global warming
  - Chemical fertilizer
  - Insecticides
  - Growth of population

### The causes of global warming

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5. What is the cause of the environment becoming dangerously threatened?
  - Warming
  - Cold wave
  - Fog
  - Earthquake

6. Which gas increased the most in the atmosphere in the last one century? /DB '19/
  - Ozone
  - Halon
  - Methane
  - Carbon-di-oxide

7. What is the main element of air? [DB '19]

- Nitrogen and Methane
- Oxygen and Nitrogen
- Oxygen and Carbon-di-oxide
- Oxygen and Nitrous oxide

8. Which layer of air does absorb the ultraviolet ray from the sun? [JB '19]

- Troposphere
- Tratosphere
- Ozone layer
- Lethosphere

9. What is the closest layer to the earth in the atmosphere? [SB '19]

- Ozonosphere
- Mesosphere
- Stratosphere
- Troposphere

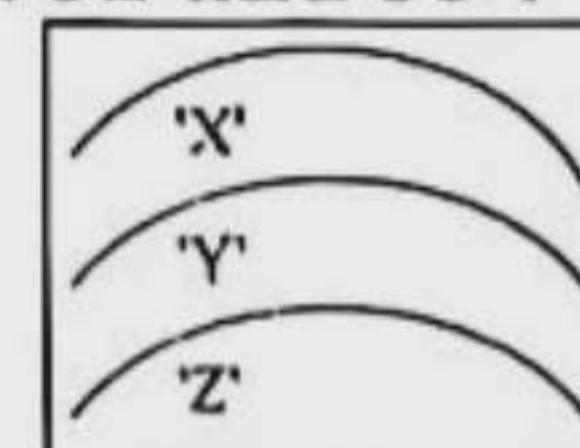
10. Which countries use maximum fossil fuel? [DjB '19]

- Undeveloped
- Developed
- Developing
- Less developing

11. Which one is a manmade gas? [MB '19]

- Methane
- Halon
- Nitrous oxide
- Carbon-di-oxide



- 12. What is the average height in km. of Troposphere from sea-level? [DB '18]**
- (a) ④ 25    (b) 20    (c) 19    (d) 12
- 13. How does black smoke in the industrial sectors increase global warming? [CtgB '18]**
- (a) By increasing the amount of Nitrogen  
 (b) By increasing the amount of Carbon  
 (c) By increasing the amount of Nitrous-oxide  
 (d) By increasing the amount of methane
- 14. Because of which is the environment seriously endangered? [CtgB '18]**
- (a) Industrialization    (b) Urbanization  
 (c) Globalization    (d) Warming
- 15. What is the nearest level of the surface? [SB '18]**
- (a) Mesosphere    (b) Thermosphere  
 (c) Ozone layer    (d) Troposphere
- 16. What is the impact of global warming? [SB '18]**
- (a) Increase of greenhouse gas  
 (b) Decrease of crop production  
 (c) Increase of population  
 (d) Deforestation
- 17. Which is responsible for cancer and skin disease in human body? [BB '18]**
- (a) Arsenic    (b) Ozone gas  
 (c) Ultraviolet ray    (d) Nitrous oxide
- 18. The oceans are compared with which organ of human body? [DjB '18]**
- (a) Heart    (b) Brain    (c) Lung    (d) Liver
- 19. Emon is an inhabitant of Rajshahi district. He observes that his surroundings area is gradually turning into desert. Which one is responsible for the change of this area? [DB '17]**
- (a) Landslide    (b) Earthquake  
 (c) Increase of salinity    (d) Global warming
- 20. In the last one century what amount of Methane has increased? [RB '17]**
- (a) ④ 100%    (b) 50%    (c) 25%    (d) 19%
- 21. Which one of the following is responsible to produce HCFC gas? [JB '17]**
- (a) Plastic items  
 (b) Diesel driven engine  
 (c) Smoke emitted from industries  
 (d) Motor car
- 22. Which layer of the atmosphere does absorb ultra violet rays coming from the sun? [JB '17]**
- (a) Troposphere    (b) Stratosphere  
 (c) Ozone layer    (d) Lithosphere
- 23. Which one is the man-made gas? [CB '17]**
- (a) Halon    (b) Mithane  
 (c) Carbon-di-oxide    (d) Nitrogen
- 24. Oceans are considered as the which part of human body of the earth? [CtgB '17]**
- (a) Lungs    (b) Heart  
 (a) Driving force    (d) Frame
- 25. Which one of the following produces HCFC gas? [SB '17]**
- (a) Refrigerator    (b) Motor car  
 (c) Smoke from industries    (d) Diesel driven engine
- 26. What is called the ocean of the earth? [RB; DjB '16]**
- (a) Lungs    (b) Soul  
 (a) Life    (d) Store house
- 27. The Ozone layer is extended up to— [BB '16]**
- (a) 20 kilometers    (b) 15 kilometers  
 (c) 12 kilometers    (d) 10 kilometers
- 28. The most important cause of the increasing carbon di-oxide in the atmosphere is—. [BB '16]**
- (a) population growth    (b) deforestation  
 (c) industrial wastage    (d) excessive vehicles
- 29. The cause of spoiling environmental balance— [BB '18]**
- over population
  - river erosion
  - deforestation
- Which one is correct?**
- (b) (a) i & ii    (b) i & iii    (c) ii & iii    (d) i, ii & iii
- 30. Due to global warming—. [JB '16]**
- salinity will increase
  - food production will increase
  - different types of diseases will spread
- Which one is correct?**
- (c) (a) i & ii    (b) ii & iii    (c) i & iii    (d) i, ii & iii
- 31. Reason of global warming—. [CtgB '16]**
- Industrial garbage
  - using organic fertilizer in agriculture
  - black fume of vehicles
- Which one is correct?**
- (d) (a) i & ii    (b) i & iii    (c) ii & iii    (d) i, ii & iii
- Look at the figure given below and answer question No. 32 and 33 :**
- 
- Figure : Layers of Atmosphere of the earth [CB '19]**
- 32. What is the name of the layer 'Z'? [RB '17]**
- (a) Ozone layer    (b) Tropopause  
 (c) Troposphere    (d) Stratosphere
- 33. What can happen due to the damage in the layer 'X'? [RB '17]**
- (a) Global temperature doesn't change  
 (b) Global temperature increases  
 (c) Living things on earth are saved  
 (d) Temperature on earth remains cool at night
- Read the following passage and answer the questions No. 34 and 35 :**
- When Mr Imtiaz went to the showroom to buy air conditioner, the shopkeeper advised him to buy environment friendly air conditioner. [DB '17]

34. What type of air conditioner did Mr Imtiaz buy?  
 Ⓛ Hydrogen free Ⓜ Oxygen free  
 Ⓝ Nitrogen free Ⓞ Carbon free

35. The element is harmful because it—.

- i. destroys ozone layer
- ii. destroys the machine
- iii. increase global warming

Which one is correct?

- Ⓐ Ⓛ i & ii Ⓜ i & iii Ⓝ ii & iii Ⓞ i, ii & iii

### The concept and kinds of disaster

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36. Disasters that are created due to the mal practices of human beings it called—.

- ⓐ sudden disaster Ⓜ natural disaster
- ⓒ man made disaster Ⓞ none of these

37. What is the meaning of the term Tsunami?

- ⓐ River wave Ⓜ Lake wave
- ⓒ Wave at sea shore Ⓞ Sea wave

38. Tsunami is a— word.

- ⓐ French Ⓜ Japanese
- ⓑ English Ⓞ German

39. In which year huge Tsunami hit Japan?

- Ⓐ Ⓛ 2011 Ⓜ 2009 Ⓝ 2012 Ⓞ 2006

40. How many electric plants in Japan were damaged?

- Ⓐ Ⓛ Five Ⓜ Four Ⓝ Three Ⓞ Nine

41. Erosion of soil from the hill is known as what?

- ⓐ Hill erosion Ⓜ Landslide
- ⓑ Tsunami Ⓞ Earthquake

42. When do we monitor water gain and loss?

- ⓐ During flood Ⓜ During cyclone
- ⓐ During earthquake Ⓞ During landslide

43. Which part of our country suffers from drought?

- ⓐ Southern Ⓜ Northern
- ⓑ Eastern Ⓞ Western

44. Which is called the Lungs of the earth? [DB '16]

- Ⓐ Ⓛ River Ⓜ Gulf Ⓝ Ocean Ⓞ Desert

45. Which one is the man-made disaster?

[RB; DjB '16]

- ⓐ War, deforestation
- ⓑ Fire, volcanic eruption
- ⓒ Desertification, tidal wave
- ⓐ Ⓛ River erosion, landslide

46. How many types of disaster are there?

[JB '16]

- Ⓐ Ⓛ 2 Ⓜ 3 Ⓝ 4 Ⓞ 5

47. Types of disaster are—. [JB '17]

- i. national
- ii. natural
- iii. manmade

Which one is correct?

- Ⓒ Ⓛ i & ii Ⓜ i & iii Ⓝ ii & iii Ⓞ i, ii & iii

### Different kinds of natural disasters

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48. What kind of disaster may take place in hilly areas which are made with sand stone or heavy mud? [CB '19]

- ⓐ Land slide Ⓜ Earthquake
- ⓐ Drought Ⓞ River erosion

49. Which of the following is most responsible for environmental pollution? [BB '19]

- ⓐ Use of pesticides Ⓜ Black fume of industry
- ⓓ Radioactive wastes Ⓞ Deforestation

50. Which problem would Bangladesh face if Tsunami hit? [DjB '19]

- ⓐ Coastal area would go under water
- ⓑ Houses would go under mass of land
- ⓒ Nuclear radioactivity would spread

- ⓐ Temperature of the country would increase

51. Landslide takes place—. [DB '17]

- ⓐ flood Ⓜ cyclone
- ⓓ tornado Ⓞ heavy rainfall

52. What type of disaster is Tsunami? [JB '16]

- ⓐ Natural Ⓜ Manmade
- ⓐ Geographical Ⓞ Geological

53. Generally which disaster occurs due to intense and long time rainfall? [CtgB '16]

- ⓐ Tsunami Ⓜ Cyclone
- ⓓ Earthquake Ⓞ Landslide

54. The main cause of the landfall is—. [BB '16]

- ⓐ deforestation Ⓜ earthquakes
- ⓒ rainfall Ⓞ Tsunami

55. — are some examples of natural disasters.

- i. Tidal bore
- ii. Volcanic
- iii. Tornado

Which one is correct?

- Ⓓ Ⓛ i Ⓜ iii Ⓝ ii & iii Ⓞ i, ii & iii

56. Fire outbreaks due to—.

- i. natural cause
- ii. social cause
- iii. man made cause

Which one is correct?

- Ⓐ Ⓛ i & iii Ⓜ i & ii Ⓝ ii & iii Ⓞ i, ii & iii

57. Landslide is very common in—.

- i. Chittagong
- ii. Sylhet
- iii. Cox's Bazar

Which one is correct?

- Ⓓ Ⓛ iii Ⓜ ii & iii Ⓝ i & ii Ⓞ i, ii & ii

58. Fire occurs due to—

- i. excessive heat
- ii. less consciousness
- iii. green house effect

Which one is correct?

- Ⓐ Ⓛ i & ii Ⓜ i & iii Ⓝ ii & iii Ⓞ i, ii & iii



59. While teaching in the classroom the teacher realized that the entire room suddenly is vibrating. In such situation he has to —. [CB '18]
- rush out
  - go to an open place
  - not to be afraid

**Which one is correct?**

- (C) (A) i & ii (B) i & iii (C) ii & iii (D) i, ii & iii  
 █ Read the passage below and answer to the question No. 60 :

Last year Mr. Iqbal felt a heavy shake while staying a hotel in Cox's bazar. After the shock the manager of the hotel made him careful about another disaster. [DjB '19]

60. About which disaster did the authority make him careful?

- (A) Cyclone (B) Flood  
 (C) Tsunami (D) Tornado

- █ Read the following passage and answer to the questions No. 61 and 62 :

At night from an online newspaper on internet Rafiq came to know that 8 persons from 10 families died being buried under the mud beside the hills of Chittagong caused by heavy rainfall. [DjB '18]

61. Which disaster is indicated in the above stem?

- (A) Forest fire (B) Earthquake  
 (C) Landslide (D) Flood

62. The causes of such disaster are —.

- cutting down of trees extensively
- global warming
- long-term rainfall

**Which one is correct?**

- (A) i & ii (B) i & iii (C) ii & iii (D) i, ii & iii  
 █ Read the stem and attempt questions No. 63 and 64 :

Fuad watched on television that in Indonesia many people were injured due to volcanic eruption at the bottom of the sea. [CB '16]

63. Which disaster is indicated in the stem?

- (A) Tsunami (B) Cyclone  
 (C) River erosion (D) Draught

64. The disaster may occur most —.

- coastal area
- hilly region
- earthquake prone region

**Which one is correct?**

- (B) (A) i & ii (B) i & iii (C) ii & iii (D) i, ii & iii

### Causes of Natural Disaster ► Textbook Page 130

65. Which disaster is created due to the activities of the people? [JB '19]

- (A) draught (B) desert  
 (B) river erosion (D) flood

66. What is the cause of Bangladesh to be a disaster prone country? [JB '17]

- Geographical location
- Unawareness of people
- Political unrest
- Social unawareness

67. Natural disasters causes —.

- water and air we polluted
- women, children and old people are affected much
- many diseases are outbreaken

**Which one is correct?**

- (D) (A) i & ii (B) ii & iii (C) i & iii (D) i, ii & iii

68. The cause of increasing natural disaster in the world is —. [CtgB '19]

- increasing of mill and factory
- increasing of consumption of luxury goods
- destruction of trees for construction work

**Which one is correct?**

- (D) (A) i & ii (B) i & iii (C) ii & iii (D) i, ii & iii

69. The disasters in Bangladesh occurs for —. [MB '19]

- geographical position
- carelessness of people
- heavy rainfall

**Which one is correct?**

- (B) (A) i & ii (B) i & iii (C) ii & iii (D) i, ii & iii

### The Impacts of Natural Disasters on Life and Economy of Bangladesh

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70. In which year 'Sidr' took place?

- (C) (A) 2005 (B) 2006 (C) 2007 (D) 2008

71. In which year "Aila" took place?

- (B) (A) 2008 (B) 2009 (C) 2010 (D) 2011

72. What type of disaster occurs suddenly?

- Green house effect (B) cyclone
- flood (D) drought

73. Which is the drought prone region of Bangladesh? [SB '19]

- Khulna (B) Cumilla
- Rangpur (D) Barishal

74. How many percentage of total land area of Bangladesh is flooded every year? [RB '18]

- (C) (A) 10 (B) 15 (C) 20 (D) 30

75. Which one is the most responsible for environmental pollution? [CB '18]

- Use of pesticides (B) Smoke from factories
- Radioactive waste (D) Deforestation

76. Where does man die in our country as a result of land erosion or fall of land or land crack? [BB '18]

- Netrokona (B) Keshoreganj
- Noakhali (D) Sunamganj

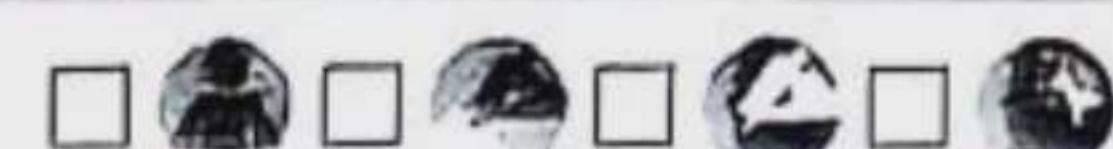
77. Because of level of sea water being increased sea water has entered the coastal areas of Bagharhat. For this— [CtgB '19]  
 i. fish cultivation has increased  
 ii. the agricultural land has become barren  
 iii. there has been a lack of employment  
 Which one is correct?  
**C** ① i & ii ② i & iii ③ ii & iii ④ i, ii & iii
78. This year, floods occurred in northern Bangladesh. Our main concern is for affected people of the area— [SB '19]  
 i. provide dry food and drinking water  
 ii. initiatives vaccination for infectious diseases  
 iii. work together to deal with the situation  
 Which one is correct?  
**D** ① i & ii ② i & iii ③ ii & iii ④ i, ii & iii
79. Resident of coastal area Monumia received the cyclone signal No. 4. Now he has to— [CB '18]  
 i. keep his cattles on a high land  
 ii. wait for the signal No.-5  
 iii. give priority to his own interest  
 Which one is correct?  
**A** ① i & ii ② i & iii ③ ii & iii ④ i, ii & iii
80. For the deforestation— [DB '16]  
 i. the rainfall is decreasing  
 ii. the risk of desertification is increasing  
 iii. the level of sea-water is increasing  
 Which one is correct?  
**A** ① i & ii ② i & iii ③ ii & iii ④ i, ii & iii  
**■** Read the following passage and answer to the questions No. 81 and 82 :  
 Rah and Kari was discussing about disasters. Rah said that in 1988, he faced a disaster. During that disaster the main vehicle was boat. People as well as their domestic animals took shelter in the shelter centre. In that disaster all crops of the low land were destroyed.
81. In the stem which sorts of disaster did Rah indicate in 1988?  
**A** ① Drought ② Earthquake  
**D** ③ Cyclone ④ Flood
82. The significance of the disaster is—  
 i. creating healthy and fair environment after disaster  
 ii. decreasing the socio-economic condition  
 iii. threatful of the environment  
 Which one is correct?  
**B** ① i & ii ② ii & iii ③ i & iii ④ i, ii & iii  
**■** Read the following passage and answer the question numbers 83 and 84 :  
 Tahsan and Nirob were discussing about a disaster. Tahsan said, in 1998 I faced a disaster. That time our main transport for movement was boat. Man with all their cattle head and house holds took shelter on the cross dam.

83. In the stem Tahsan mentioned which disaster of 1998?  
**A** ① Draught ② Flood  
**B** ③ Cyclone ④ Earthquake
84. Damage of this disaster is—  
 i. Houses and crop field go under water  
 ii. Chicken pox spreads out  
 iii. Water born disease spreads out  
 Which one is correct?  
**C** ① i & ii ② ii & iii ③ i & iii ④ i, ii & iii  
**■** Read the stem and answer the questions No. 85 and 86 :  
 Sima lives in the coastal area of Bangladesh. One day she got a danger signal of a natural disaster. She left the house and went to a shelter centre. On the other hand, Hasu Miah is a poor farmer. Recently the crops of his land have died due to excessive heat and no rain for a long time. [RB '19]
85. For which disaster has Sima gone to the shelter centre?  
**A** ① Flood ② River erosion  
**D** ③ Tornado ④ Cyclone
86. In this situation Hasu Miah can—  
 i. find other professions besides agriculture  
 ii. use environment friendly fertilizer  
 iii. make house inside embankment  
 Which one is correct?  
**A** ① i & ii ② i & iii ③ ii & iii ④ i, ii & iii  
**■** Read the stem and answer the following questions No. 87 and 88 :  
 Mr Rahim Miah, the inhabitant of the bank of the river Kushiara leaving his home and land has come in Sylhet with all of his family. But still now he laments for his land of father and grandfather. [JB '18]
87. Which natural disaster is responsible for the misery of Mr Rahim Miah?  
**A** ① River erosion ② Land slide  
**A** ③ Tornado ④ Earthquake
88. Steps should be taken to face disasters—  
 i. pregnant women and children should be admitted into hospitals  
 ii. have to sell trees and vegetable of the house  
 iii. the cattle house and kitchen should be shifted is a safer place.  
 Which one is correct?  
**C** ① i & ii ② i & iii ③ ii & iii ④ i, ii & iii  
**■** Read the stem and answer the questions No. 89 and 90 :  
 Sima and her family lived near the bank of the Tista. But now only water is there. Her family shifted Dhaka for earning their livelihood. On the other hand, Mr Z is a poor farmer. Recently his crops have died due to excessive heat and no rain for a long time. [SB '18]



89. For which disaster has Sima's family shifted Dhaka?  
 ④ Flood                    ⑥ River erosion  
 ② Cyclone                ⑧ Land slide
90. As a farmer Mr Z can—  
 i. to find other professions besides this  
 ii. use environment friendly fertilizer  
 iii. make house inside embankment  
**Which one is correct?**  
 ③ ④ i & ii    ⑤ i & iii    ⑦ ii & iii    ⑨ i, ii & iii
- Read the following stem and answer the questions No. 91 and 92 :  
 A speaker said in an environmental conference that the world's temperature is increasing due to factory and vehicles black fume, nuclear, garbage, refrigerator, ac, chemical fertilizer, pesticides, deforestation etc. [DjB '17]
91. The impact of the above stem is of increasing world temperature—  
 i. it will create imbalance environment  
 ii. it will increase the water level of sea  
 iii. it will increase fertile of land  
**Which one is correct?**  
 ④ ⑤ i    ⑥ ii    ⑦ i & ii    ⑧ i, ii & iii
92. According to stem the cause of increasing temperature—  
 i. use of luxurious products  
 ii. massive urbanization  
 iii. use of much fossil fuels  
**Which one is correct?**  
 ④ ⑤ i & ii    ⑥ i & iii    ⑦ ii & iii    ⑧ i, ii & iii
- Duties and responsibilities during natural disasters** ▶ Textbook Page 131
93. Why is it necessary to learn how to swim? [SB '18]  
 ④ To protect us from drowning  
 ⑥ To manage flood  
 ⑧ To be safe from river erosion  
 ② ⑩ To keep us healthy
94. Why should oral saline be kept prior to disaster? [RB '17]  
 ④ As saline is a nutritious food  
 ⑥ As the price of saline will be high at that time  
 ⑧ As it may create dehydration  
 ② ⑩ As there is possibility of diarrhoea after disaster
95. After hearing which number of alarming signal it needs to shift the children, old people and women to shelter centres? [JB '17]  
 ④ ⑥ 2    ⑧ 3    ⑩ 4    ② ⑩ 5
96. After hearing which signal number children and old people should be shifted to shelter centre? [SB '17]  
 ④ ⑥ 3    ⑧ 4    ⑩ 5    ② ⑩ 6

97. Which one of the reason of the Importance of forest? [CtgB '16]  
 ④ To keep the environmental balance  
 ⑥ For carbon-di-oxide  
 ⑧ Only to collect food  
 ② ⑩ for the need of vegetables
98. Preparedness that should be before earthquake—  
 i. there should be special doors in the house  
 ii. torchlight and helmet should have  
 iii. big size wooden table should be prepared  
**Which one is correct?**  
 ④ ⑤ i & iii    ⑥ i & ii    ⑦ ii & iii    ⑨ i, ii & iii
99. The cause of Bangladesh to be a disaster prone area is— [CtgB '18]  
 i. Landscape consists of flood plain  
 ii. The Himalayas in the north and the Bay of Bengal in the south  
 iii. Absence of hill and mountain in the south  
**Which one is correct?**  
 ④ ⑤ i & ii    ⑥ i & iii    ⑦ ii & iii    ⑨ i, ii & iii
100. For the deforestation— [SB '17]  
 i. the rainfall is decreasing  
 ii. the risk of desertification is increasing  
 iii. the level of sea-water is increasing  
**Which one is correct?**  
 ④ ⑤ i & ii    ⑥ i & iii    ⑦ ii & iii    ⑨ i, ii & iii
101. We don't need to go to any shelter centre for signal number— [BB '16]  
 i. 1 and 2  
 ii. 3 and 4  
 iii. 4 and 5  
**Which one is correct?**  
 ④ ⑤ i & ii    ⑥ i & iii    ⑦ ii & iii    ⑨ i, ii & iii
- Read the following stem and answer the questions No. 102 and 103 :  
 Sakib's house submerged by the water from upper stream. His family members became frightened. [JB '16]
102. What should Sakib do during such disaster?  
 i. Know about flood forecast  
 ii. Take shelter under table  
 iii. Pay special attention to little children  
**Which one is correct?**  
 ④ ⑤ i & ii    ⑥ ii & iii    ⑦ i & iii    ⑨ i, ii & iii
103. What steps can be taken to be saved from such disaster? [JB '16]  
 ④ Population control  
 ⑥ Training people  
 ⑧ Applying modern technology  
 ② ⑩ Excavating river and building dams.

**Short Q/A****Designed as per topic****► Introduction**

► Textbook Page 123

**Question 1. What do you mean by climate change?**

**Ans.** Climate change refers to a long-term and significant change in the average climate of a place, which can range from a few decades to several hundred thousand years. Climate change is observed all over the world due to the increase in surface temperature or global warming.

**Question 2. Write the effects of climate change.**

**Ans.** Climate change results in reduced crop production in tropical countries during the dry season. In addition, it causes excessive rainfall, floods, and waterlogging during the rainy season. Natural disasters such as droughts, hailstorms, cyclones, and tidal waves occur during the dry season. Also, sudden cold or hot waves and dense fog are observed during the winter season.

**Question 3. Mention the causes of natural disasters in Bangladesh.**

**Ans.** The geographical position and global warming of Bangladesh are the causes of natural disasters. The impact of these disasters can be observed on the life and economy of Bangladesh. In this case, some natural disasters in Bangladesh are floods, cyclones, tidal waves, tornadoes, earthquakes, droughts, river erosion, etc.

**► The Concept of Global Warming**

► Textbook Page 123

**Question 4. What do you mean by global warming?**

**Ans.** While the amazing discoveries of science have made human life happy and comfortable, they have also damaged or imbalanced the natural environment of the earth. Population boom, deforestation, mills and factories, along with engine-driven vehicles, are disrupting the balance of the environment and creating various problems. As a result of all these, the temperature of the earth is increasing. This is called global warming.

**Question 5. What do you mean by 'greenhouse effect'?**

**Ans.** One of the global problems is the 'greenhouse effect'. It is a complicated problem. A greenhouse is basically a covering made up of several types of gases. Greenhouse gases are also called heat-increasing gases. This gas has created a blanket-like covering around the earth in the atmosphere.

**Question 6. Briefly write about the effects of greenhouse gases.**

**Ans.** Greenhouse gases have created a blanket-like covering around the earth. This blanket absorbs the sun's heat and spreads it on the surface of the earth.

The temperature received by the surface of the earth is normally reflected into space at night and the earth cools down. However, due to the increase in the amount of certain gases in the atmosphere, the reflected heat does not completely disappear into space and heats up the atmosphere.

**Question 7. What is happening due to global warming?**

**Ans.** Due to global warming, the atmosphere and the earth are constantly getting hotter. Global warming is causing the sea level to rise and salinity is increasing in the coastal areas. In addition, various natural disasters are occurring.

**► Causes and Effects of Global Warming**

► Textbook Page 124

**Question 8. Write what you know about 'greenhouse gases'.**

**Ans.** The main components of air are nitrogen and oxygen. In addition, there is a small amount of carbon-di-oxide, methane, and nitrous oxide in the air. There is also water vapor and ozone gas. These secondary gases in the atmosphere are called greenhouse gases.

**Question 9. Write the names of three man-made greenhouse gases.**

**Ans.** Apart from naturally produced greenhouse gases, there are also some man-made greenhouse gases. Such as- 1. CFC (chloro fluoro carbon), 2. HCFC (hydro chloro fluoro carbon) and 3. Halon gas.

**Question 10. What is the increase in greenhouse gases in the last century?**

**Ans.** Among the various greenhouse gases, the amount of carbon-di-oxide in the atmosphere has increased by 25 percent in the last century. Similarly, the amount of nitrous oxide has increased by 19 percent and the amount of methane has increased by 100 percent.

**Question 11. What do you mean by 'ozone layer'?**

**Ans.** The ozone layer is a layer of the Earth's atmosphere where there is a relatively high concentration of ozone gas. The atmosphere has many layers. The layer next to the troposphere is the ozone layer. Which extends up to 20 km. The thickness of this layer varies from place to place and from season to season.

**Question 12. Write about the function of the ozone layer.**

**Ans.** The ozone layer protects the living world of the earth by absorbing the sun's ultraviolet rays. Apart from this, the ozone layer acts as an invisible shield. There would be no existence of life on Earth without the ozone layer. Due to the depletion of the ozone layer, the effect of ultraviolet rays on the surface has increased by five percent.



**Question 13. What do you mean by fossil fuels?**

**Ans.** Fossil fuels are a type of fuel that is formed by the anaerobic decomposition process in the absence of air. This process takes millions of years to create fuel. Some fossil fuels are coal, natural gas, mineral oil, etc.

**Question 14. Mention some of the causes of global warming.**

**Ans.** Developed countries in the world are destroying the environment by using fossil fuels at a high rate. In addition, these countries use nuclear plants, which generate a lot of waste. This waste also increases greenhouse gases, but its role in global warming is very small. A large amount of mercury, lead, and arsenic is also emitted from industrial waste and black smoke. These are the causes of global warming.

**Question 15. What is the role of the oceans in controlling the temperature of the world?**

**Ans.** Oceans can be compared to the lungs of the human body. Oceans have a significant role in controlling world temperature. But due to the disposal of radioactive waste in the sea, it is getting polluted and this polluted vapor is also contributing to global warming by mixing with the air. Therefore, we should not throw waste in the sea.

**Question 16. Write about the reason for the increase in the amount of carbon-di-oxide in the atmosphere.**

**Ans.** We know that green trees take in carbon-di-oxide from the environment and leave out oxygen for us. However, due to massive deforestation, the amount of carbon-di-oxide in the atmosphere has increased. As a result, the amount of ozone-depleting CFC gas in the atmosphere has increased abnormally.

**Question 17. What do you mean by 'carbon-dioxide'?**

**Ans.** Cities are being built rapidly in the present world. People are rushing to cities in search of work. As a result, the pressure of population and the number of different types of vehicles are increasing in the cities. The black smoke emitted by these vehicles is carbon-dioxide.

**Question 18. Write the effects of using chemical fertilizers in agriculture.**

**Ans.** Mechanical irrigation, nitrogen fertilizers, pesticides, etc. are used in agriculture. These also damage the ozone layer of the atmosphere. Due to which global warming is increasing.

**Question 19. Write three harmful effects of global warming.**

**Ans.** Three harmful effects of global warming are-  
1. The mangrove forests of the coastal areas of

Bangladesh have been damaged. 2. The biodiversity of the Sundarbans is being destroyed. 3. Salinity has increased in the agricultural lands of the coastal areas.

**Question 20. How is the rise in sea level affecting life and livelihood?**

**Ans.** Seawater enters the coastal areas due to the rise in sea level. As a result, salinity has increased in the agricultural lands of the coastal areas. The fertility of the land has decreased. Many kinds of sweet water fish are disappearing. Trees and plants are being destroyed. This is affecting people's lives and livelihoods.

**Question 21. What do you mean by natural disaster?**

**Ans.** When a natural accident or disaster disrupts the normal life of a community, we call it a natural disaster. Natural disasters come suddenly. Common people have no control over it. Like - floods, cyclones, tidal waves, tornadoes, earthquakes, etc.

**Question 22. Name two natural disasters originating in the sea.**

**Ans.** Two natural disasters originating in the sea are 'Ayla' and 'Sidr'. Due to these two natural disasters, there has been loss of life and massive damage to property in the coastal areas of our country. There is an acute shortage of drinking water. Already about one-fourth of the Sundarbans has been destroyed. This has damaged biodiversity and fishery resources.

**Question 23. What diseases do humans get due to warming?**

**Ans.** Due to the increase in temperature on the surface and the direct entry of the sun's ultraviolet rays into the earth, various types of fatal diseases are caused to humans and other animals. Due to warming, various new diseases including cancer and skin diseases appear in humans.

**► The Concept and Kinds of Disaster**

► Textbook Page 127

**Question 24. What do you mean by disaster?**

**Ans.** When any natural or man-made situation becomes unnatural and intolerable and as a result of which crops, asset and life are destroyed and environment is damaged, it is called disaster.

**Question 25. How many types of disasters are there?**

**Ans.** Disasters are of two kinds; natural disasters and man-made disasters. Natural disasters take place suddenly and human beings are generally helpless here. However, man-made disasters are results of some activities done by them. We can avoid them or save ourselves from their adverse impact by being conscious and careful.

**Question 26. What is a man-made disaster?**

**Ans.** Disasters that are created due to the malpractices of human beings or which are caused due to their lack of far sightedness are called human being created disasters. This type of disaster destroys lives and disrupts natural lifestyles. It also disturbs ecological balance and increases restlessness in a society. Some of the man-made disasters are war, communal riot, deforestation, water logging through obstacles at natural flow of rivers and desertification, fire, pollution etc.

**Question 27. Give five examples of natural and man-made disasters.**

**Ans.** Five natural disasters are flood, cyclone, earthquake, river erosion, tsunami. Five man-made disasters are war, communal riot, deforestation, fire, pollution.

**➤ Different Kinds of Natural Disasters**

► Textbook Page 128

**Question 28. Write about the natural disaster earthquake.**

**Ans.** Among all the natural disasters of the world earthquake causes much havoc within a very short time. No advance news can be conveyed about earthquake. It turns a whole area into debris with a shake or some before human beings knowing anything about it. Generally massive, moderate or mild earthquake may occur several times at the same place.

**Question 29. Which districts of Bangladesh are earthquake-prone?**

**Ans.** Bangladesh is at the risk of earthquake. Particularly Dhaka, Sylhet, Rangpur and Chattogram are in the most risky zones. In recent times mild quakes often shake Chattogram and Sylhet.

**Question 30. What do you mean by tsunami?**

**Ans.** 'Tsunami' is another natural disaster. It is mainly a Japanese word which means waves of the sea shore. If there is any movement at the sea bed due to earthquake or volcanic eruption or any other reasons, massive waves are created throughout a large area. These waves dive on the coastal belt with strong current ranging from 800 to 1300 kilometres per hour.

**Question 31. Mention the harmful effects of tsunamis.**

**Ans.** Due to Tsunami the water of the sea turns into tidal bore and enters within 10 kilometres of the coastal belt with a huge speed as mentioned above. As a result, within a very short time houses and buildings, road or railways or other communications, electricity or business centres can be completely

destroyed. A huge Tsunami hit the north-east area of Japan in 2011. As a consequence, five nuclear electric plants in Japan were highly damaged.

**Question 32. Why does landslide occur?**

**Ans.** The sudden fall of a mass of earth from a hill or mountain is called landslide or landfall. Hills composed of sand-stones or heavy mud may have landslides during intense rain or long-time rain. In addition, landslides also take place for massive deforestation and leveling of hills.

**Question 33. What do you mean by fire or wildfire?**

**Ans.** Fire may take place as a natural disaster as well as a disaster caused by carelessness or an accident. Sometimes fire takes place at forests in many countries because of immense heat. It is called wildfire.

**Question 34. Write the sources of fire in Bangladesh.**

**Ans.** In Bangladesh, fire takes place due to carelessness or as an accident. This accident usually takes place in mills and factories, oil refineries, garment industries, jute mills, chemical godowns, residential buildings, shops, offices, and commercial centers. It is to note here that both in the rural and urban areas lack of consciousness is a prime factor for fire and often the sources of fire are burning ovens, lamps, mosquito coils, cigarettes and hurricanes (kerosene lamps) etc.

**➤ Causes of Natural Disaster** ► Textbook Page 130**Question 35. Mention the causes of natural disasters in Bangladesh.**

**Ans.** Natural disasters are caused by natural factors. The geographical position of a country, climate impacts, global warming i.e. the natural environment as a whole is liable for natural disaster. In the context of Bangladesh, geographical position, climate, soil structure, rivers and canals etc. are considered as the causes of natural disasters.

**Question 36. Write about the soil structure of Bangladesh.**

**Ans.** Most of the land of Bangladesh is built during the recent time as flood plain. Besides, geographically Bangladesh is located near the plate on which India and Myanmar are situated.

**➤ Impacts of Natural Disasters on Life and Economy of Bangladesh** ► Textbook Page 130**Question 37. Write the impact of the natural disaster flood on the economy.**

**Ans.** Natural disasters occur more or less every year in Bangladesh. Flood is one of them. The floods of 1988, 1998, 2002, 2004, and 2009 were dreadful. These floods caused much destruction to the crops of farmers, their houses, cattles, trees, fish-farms, mills and factories, business-firms etc.



**Question 38.** Briefly write about the impact of natural disasters on public life.

**Ans.** Natural disasters pollute air and water which affect human life greatly. Filth and waste, dead bodies of animals and human waste driven by floods, tidal waves and tornado pollute air and water around us.

**Question 39.** Mention the reason for the establishment of slums in cities.

**Ans.** Natural disasters are also responsible for the establishment of slums in the cities of our country. Due to these disasters thousands of people lost their houses and belongings and had to move elsewhere for their living.

**Question 40.** How is the natural disaster cyclone or tidal bore affecting us?

**Ans.** Strong wind blows during cyclones and high tidal waves cause much damage to the trees of coastal areas. Again tidal waves increase salinity in inland water which kills fish.

**Question 41.** How many phases have disaster management been divided into and what are they?

**Ans.** Disaster management has been divided into three phases. These are :

1. Pre-disaster dos
2. During disaster dos and
3. Post-disaster dos.

#### ► Duties And Responsibilities During Natural Disaster

► Textbook Page 131

**Question 42.** Write about what to do in disaster management.

**Ans.** Due to geographical location and natural characteristics, Bangladesh is a disaster-prone area. The people of this country have been fighting natural disasters for ages for their survival. Natural disasters cannot be prevented in most cases. However, the amount of death and destruction in these disasters can be reduced to some extent with proper planning and preparation.

**Question 43.** Write three things to do before a disaster to deal with floods and cyclones.

**Ans.** Three things to do before a disaster to deal with floods and cyclones :

1. Make an extra roof or platform inside your house and preserve food grains, seeds, etc. there so that even if water enters the house, they do not get damaged.
2. Encourage every member of your family to learn to swim.
3. Repair the house and especially strengthen the poles before the flood or cyclone season starts.

**Question 44.** Write two things to do during a disaster.

**Ans.** Two things to do during a disaster :

1. Drink pure or safe water during disasters. Water from tubewells whose mouths are not submerged in water is safe to drink. If necessary, drink water after boiling it well or using water purification tablets or alum.
2. Take special care of young children during any disaster. Be more careful with the sick, disabled, pregnant women, and the elderly.

**Question 45.** Write two things to do after a disaster.

**Ans.** Two things to do after a disaster :

1. Return to your own homes from the shelter centers when the flood waters recede or when the storm has completely stopped.
2. Clean and repair houses and make them habitable, using bleaching powder if necessary.

**Question 46.** What preparations should be taken to deal with river erosion?

**Ans.** If there is a fear of river erosion somewhere, the first step should be to prepare to save lives and property. It is better to decide where to take shelter if there are signs of river erosion. We should shift children, old people, pregnant women, new mothers, and disabled people to safe shelters or to relatives' houses. Domestic ducks, chickens, cows, goats should be moved to safe places. Valuable household items and documents should be moved to a safe place in advance.

**Question 47.** What steps can we take before river erosion?

**Ans.** We can take a number of steps before river erosion that will keep us safe. Even if something is built on the river bank, it should be done in such a way that it can be easily removed. In addition, such trees should be planted on the river banks whose roots go very deep into the soil. If the erosion of the river is evident, we must always observe the condition of the river.

**Question 48.** Write some steps to deal with drought.

**Ans.** We can take several steps to deal with drought, such as ponds and canals should be dug in these areas before the drought starts. In addition, rainwater should be stored wherever possible. Dry food and cash should be stored for the disaster period. It is necessary to stock food for livestock as well. Crops that do not require much water should be cultivated in drought-prone areas.

**Question 49. What should be done in agriculture to deal with drought?**

**Ans.** After the drought is over, organic fertilizers should be used instead of chemical fertilizers in agriculture. Weeds and garbage should be cleaned to reduce water wastage. Deep cultivation of land should be done at this time. Crops whose roots go deep into the soil should be cultivated and more trees should be planted.

**Question 50. What do you mean by earthquake prone area?**

**Ans.** The areas of Bangladesh which are at high risk of earthquakes are called earthquake prone areas. Such as- Faridpur, Rangpur, Bogra, Tangail, Dhaka, Comilla, Chittagong and Cox's Bazar. However, this does not mean that other areas of the country are free from the fear of earthquakes.

**Question 51. Briefly write the pre-earthquake preparations to deal with the earthquake.**

**Ans.** Pre-earthquake preparations to deal with earthquakes are- It is necessary to have a special door in the house for emergency exit in addition to the main door. Apart from this, first aid items, helmets, torches, etc. should be stored at home. There should be a strong table in the house where you can take shelter during an earthquake. Electric lights and gas connections should be turned off after use.

**Question 52. What activities should be taken after an earthquake?**

**Ans.** After the earthquake, the injured people should be quickly taken to the nearest hospital. Help with rescue work as much as possible. The fire brigade and ambulance should be contacted for this purpose. Temporary shelter, food and water should be arranged for the affected people.



## Creative Q/A



## Designed as per learning outcomes



**Ques. 01** While reading Mila suddenly noticed that her reading table was vibrating. She went under the table instantly. Mila's friend Rubi went to visit her paternal grandfather's house in her summer vacation. She went out side in the afternoon and saw that the soil of the crop fields were being dried and cracked. His grandfather was worried to think about not having any crop this year.

- What is called man-made disaster? 1
- Why is the sign of desertification noticed in the northern part of Bangladesh? 2
- By which disaster has Mila been attracted?— Explain. 3
- Analyze the preventive measures of the disaster by which Rubi's grandfather was affected. 4

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**Answer to Question No. 01 :**

**a** Disasters that are happened due to the malpractices of human beings or their lack of prudence are called man-made disasters.

**b** Due to global warming, the temperature of the earth is rising and the ultra violet rays of the sun also enter this world directly. This global warming is destroying the ecological balance. Consequently, it rains heavily in some places and sometimes there is no rain in other places. This is why, the sign of desertification is noticed in the northern part of Bangladesh.

**c** According to the stem, Mila suddenly noticed that her reading table was vibrating and she went under the table instantly. From this incident, we can easily guess that the disaster is nothing but an earthquake.

Among all the natural disasters of the world, earthquake causes much havoc within a very short time. No advance forecast can be conveyed about an earthquake. It turns a whole area into a debris with a shake. Generally massive, moderate or mild earthquake may occur several times at the same place. We have got evidence of it in the earthquakes of Iran, China, Mexico, Chile and Japan.

Bangladesh is at the risk of earthquake. Particularly Dhaka, Sylhet, Rangpur and Chattogram are in the most risky zones. In recent times, mild quakes often shake Chattogram and Sylhet. The quake that occurred on 18th September 2011 was quite severe. The whole country shivered with this. Man knows no means to prevent earthquake. But we can teach people to keep themselves safe during earthquake and give ideas about rescue methods and relief works after the quake.

**d** According to the stem, Rubi's grandfather was affected by draught.

Rubi's grandfather can take some precautions to face this situation. Ponds and canals can be excavated before the draught starts. He should take initiatives to reserve rain water as much as he can. He has to preserve some dry foods and save cash money for draught period. Foods should be preserved for livestock too. He can install some tube-wells in his own locality and select draught resisting crops to be cultivated in the draught prone areas.

He should find out some alternative sources of income. People should be calculative in using water and livestock should be kept away from watersides. After the draught is over, organic



fertilizers should be used instead of chemical fertilizers. Weeds and wild plants should be cleared to avoid water misuse. This time land should be cultivated in depth. Crops with long roots which can enter deep down the earth should be cultivated and more trees should be planted in the draught affected areas.

In this way, Rubi's grandfather can save himself and he can also suggest the farmers of his locality to follow the above steps.

**Ques. 02** Mr. Rakib went to visit Sylhet along with his family. But when heavy rain full started being afraid of a disaster he left that place. On the way to return he was stuck at a traffic jam caused by fire conflagration at a market.

- a. What is Tsunami? 1
- b. Why are oceans compared with lungs?— Explain? 2
- c. Which disaster is indicated at the first part of the stem?— Explain. 3
- d. "Awareness is required to prevent the 2nd disaster as described in the stem." — Analyze. 4

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#### Answer to Question No. 02 :

**a** Tsunami is a natural disaster. The word 'Tsunami' is a Japanese word that means waves of the seashore.

**b** The oceans are compared to the lungs of human body. They have significant roles in controlling world temperature. But it is a matter of sorrow that the oceans are now getting polluted as radioactive wastes are thrown there.

**c** From the description mentioned in the first part of the stem, we can infer that the disaster is landslide. A brief description about landslide is here under.

The sudden fall of a mass of earth from a hill or mountain is called landslide or landfall. Hills composed of sand-stones or heavy mud may have landslide during intense rain or long time rain. It also takes place for massive deforestation and leveling of hills. Landslide causes problems for the people who live beneath the hills as their houses can be buried down for this. This problem is very common in Chattogram, Cox's Bazar, Landslide Rangamati, Khagrachhari, Bandarban, Sylhet, Netrokona and some other districts of Bangladesh. Here many lives are lost and many houses are destroyed every year.

**d** The second disaster mentioned in the stimulus is nothing but a fire-accident.

Fire may take place as a natural disaster as well as a disaster caused by carelessness or an accident. Sometimes fire takes place at forests in many

countries because of immense heat. It is called wildfire. It destroys forest resources as well as biodiversity. Wildfire does not take place in our country. So, we do not consider fire as a natural disaster. In Bangladesh, fire takes place due to carelessness or as an fire accident. This accident usually takes place in mills and factories, oil refineries, garment industries, jute mills, chemical godowns, residential buildings, shops, offices and commercial centers. Recently the fire caused from a chemical godown at Nimtali, Dhaka has taken away many lives and leaving many people physically challenged. Many people have turned to have-nots as a consequence of it. It is to note here that both in the rural and urban areas lack of consciousness is a prime factor for fire and often the sources of fire are burning ovens, lamps, mosquito coils, cigarettes and hurricanes (kerosene lamps) etc..

In our country, most of the fire-accidents take place due to carelessness. So, a key step to prevent this type of accident is to be careful as well as make other aware of the horrible consequence due to this accident.

**Ques. 03** Part-1 : Natasha was sitting on the chair and reading. Suddenly she seemed to be turning heads she was swinging. Her reading table was also swinging. Goods were falling off the table. Her mother ran and took her out.

Part-2 : Natasha saw the tide rise in their area within 5 minutes. As a result, houses and roads were submerged. Huge damages were there. The disaster described in part-1 is responsible for this.

- a. What is landside? 1
- b. Explain the most important reason behind environmental pollution. 2
- c. What kind of disaster is indicated in the first part of the stem? Explain. 3
- d. Disasters occurring in the second part of the stem affect human life. — Analyze. 4

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#### Answer to Question No. 03 :

**a** The sudden fall of a mass of earth from a hill or mountain is called landslide or landfall.

**b** There are many reasons behind environment pollution. Among the reasons, over population is the biggest reason. Due to over population, trees are cut down to a great extent to build roads, houses, academic institutions, bazars, religious institutions and so the environment gets imbalanced. These increasing people set up mills, factories, industries and use a huge number of motor vehicles those emit a huge amount of

carbon-di-oxide; rubbish from these get mixed with air and water resulting in water and air pollution. Also, these produce huge sound that causes sound pollution. Thus, over population causes environment pollution to a great extent.

**c** The description in the part-1 of the stem indicates earthquake.

Among all the natural disasters of the world, earthquake causes much havoc within a very short time. No advance forecast can be conveyed about an earthquake. It turns a whole area into a debris with a shake. Generally massive, moderate or mild earthquake may occur several times at the same place. We have got evidence of it in the earthquakes of Iran, China, Mexico, Chile and Japan.

Bangladesh is at the risk of earthquake. Particularly Dhaka, Sylhet, Rangpur and Chattogram are in the most risky zones. In recent times, mild quakes often shake Chattogram and Sylhet. The quake that occurred on 18th September 2011 was quite severe. The whole country shivered with this. Man knows no means to prevent earthquake. But we can teach people to keep themselves safe during earthquake and give ideas about rescue methods and relief works after the quake.

**d** The disaster mentioned in the part-2 of the stem refers to tsunami. 'Tsunami' is mainly a Japanese word that means waves of the seashore.

Due to Tsunami the water of the sea turns into tidal bore and enters within 10 kilometres of the coastal belt with a huge speed as mentioned above. As a result, within a very short time houses and buildings, road or railways or other communications, electricity or business centres can be completely destroyed.

A huge Tsunami hit the north-east area of Japan in 2011. It was the result of an 8.9 Richter Scale earthquake under the sea. It hit an area which was 400 kilometres away from Tokyo the capital city of Japan. As a consequence, five nuclear electric plants in Japan were highly damaged. Radioactivity from these nuclear plants started spreading through air and water. It created huge health hazards for human beings. Thousands of railway commuters were missing and many ships drowned due to this disaster.

More than 400 people were reported dead after a tsunami struck western Java and southern Sumatra islands on 11 December, 2018. A huge number of houses, shops and other constructions were damaged. In fact, tsunami is such a type of disaster that causes a great loss to human beings.

**Ques. 04 Scenario-1 :** In July of this year maximum area of Rangpur, Gaibandha, het, Sunamganj and some other districts has been submerged by water. In there water flowed down from the hills. Due to this disaster huge people lost their houses and belonging and it causes much damage to life and domestic animals who live in open air now.

**Scenario-2 :** Once an officer saw in Japan, suddenly everything were moving at the town. After that he came to know from TV news that huge number of houses of that town have broken and transport system also became dead-locked.

- a. What is called disaster? 1
- b. Explain one of the causes of global warming. 2
- c. Identify and explain the type of disaster of scenario-1. 3
- d. Analyze the steps can be taken to reduce the damages of the disaster of scenario-2. 4

• Barishal Board 2019

#### Answer to Question No. 04 :

**a** When any natural or man-made situation becomes unnatural and intolerable and as a result, crops, assets and life, are destroyed and environment is damaged, it is called disaster.

**b** Apart form natural gases, few man-made gases such as CFC, HCFC, Halon are also called greenhouse gases.

Due to these gases, Carbon-di-oxide has increased by 25% in the atmosphere in last one century. Similarly, Nitrates oxide has increased by 19% and methane has increased by 100%. These are the main reasons of global warming. There are other causes also liable for global warming. Our household items such as refrigerator, air conditioner, plastic items, foam, aerosol etc. produce a kind of greenhouse gas. This is destroying the ozone layer of the atmosphere.

**c** The passage mentioned in scenario-1 indicates river erosion. A brief description about it is given below. River erosion is a regular natural disaster in Bangladesh. Every year, specifically during monsoon, river erosion occurs in the country. One of the reasons of this disaster is the nature of rivers. Most of the rivers of the country follow a frequently meandering course. As a result, strong current cannot flow straight and strikes the banks which start to erode. Besides, change of river courses, loose structure of river banks, river filling, unplanned embankments to control rivers, and absence of trees on river banks etc. cause river erosion too.



River erosion causes thousands of acres of cultivable land, residences and different other constructions to go down to the rivers every year. As a consequence, thousands of people of the country become homeless and destitute losing their employment too. Awareness of the causes of river erosion may minimize the disaster and its resultant damages.

**d**: The stem mentioned in scenario-2 indicates that here the disaster is earthquake. There is no forecast before an earthquake takes place. But some steps can reduce the loss due to this disaster. The steps are described below.

Every house should have an emergency exit other than the main entrance. Moreover, there should be some first aid items, few helmets and a torch light in each family. A strong table should be kept in each house to take shelter underneath during the earthquake time. Heavy furniture should be kept on the floor.

Without being upset we should stay at home until the quake stops completely. All electric and gas connections should be switched off immediately. If there is sufficient open space beside the homestead, shelter should be taken there immediately. Commuters should ask drivers to stop vehicles instantly. We must not use any lift during this time.

After the earthquake, we should take injured persons to the nearest hospitals for treatment. We should do the best to participate in the rescue work. Measures should be taken to ensure temporary shelters, foods and water for the distressed people.

**Ques. 05** Sabbir and Sohan are two friends. Sabbir is from Patuakhali and Sohan is from Gaibandha districts. Both of their areas, bad impacts are seen on the life style of the people. Area of Sabbir often goes under saline water. On the other hand no rainfall is evident even in rainy season in the area of Sohan. Farmers could not cultivate due to lack of water.

- What is called natural disaster? 1
- Explain the main cause of global warming. 2
- Explain the dos to face of disaster of Sohan's area. 3
- Analyze the relation between destroying trees and damage of crops in Sabbir's area and the mentioned disaster. 4

• Dinajpur Board 2019

#### Answer to Question No. 05 :

**a** The disasters which take place suddenly and then human beings are generally remain helpless are called natural disasters.

**b** The main elements of the air are nitrogen and oxygen. Besides, a little amount of carbon-dioxide, methane and nitrates-oxide are also available in the air along with some vapour and ozone gas.

These less important gases are called greenhouse gases. Apart from these natural gases, few man-made gases such as CFC (Chloro Fluoro Carbon), HCFC (Hydro Chloro Fluoro Carbon), Halon are also called greenhouse gases. The increase of these natural and man-made gases are the main reasons of global warming.

**c** The area of Sohan gets affected by droughts. The people of Sohan's area can excavate ponds and canals before the drought starts.

They should take initiatives to reserve rain water as much as they can. They have to preserve some dry foods and save cash money for draught period. Foods should be preserved for livestock too. They can install tube-wells in their own locality and select draught resisting crops to be cultivated in the draught prone areas. The victim families should find out some alternative sources of income. People should be calculative in using water and livestock should be kept away from watersides. After the draught is over, organic chemical should be cleaned to avoid water misuse.

**d** According to the stem, the disaster in Sabbir's area represents tsunami as his area Patuakhali is in the south of Bangladesh and very often tsunami visits there. There is a close relation between tsunami and damage of trees, crops. To clarify this idea, a brief discussion is given below.

Due to global warming, the ice of the Himalayas is melting rapidly. As a result, the height of ocean and sea is getting increased. That is why, the height of the water surface of the Bay of Bengal is getting enhanced and tsunami visits often Patuakhali and other coastal areas. At this, saline water reaches those areas and affects the trees and crops severely. As most of the trees and crops can not tolerate salinity, they die. Moreover, the soil of those areas lose fertility. Therefore, trees and crops can not survive. Hence, people of those areas suffer from food crisis.

**Ques. 06 Event-1 :** Abir a boy of Rajshahi went to a crop field in the month of May and saw that the crops of many places became dried up and the ground became grind.

**Event-2 :** In recent rainy season many districts of Sylhet submerged under water and the life of the people became miserable.

- What is Tsunami? 1
- Explain a cause of natural disaster. 2
- Explain the steps of confronting the disaster that was seen in the area, visited by Abir. 3
- The disaster mentioned in 'Event-2' makes the people's life miserable. Analyse. 4

• Dinajpur Board 2018; Rajshahi Board 2018

**Answer to Question No. 06 :**

- a** 'Tsunami' is a natural disaster. It is mainly a Japanese word which means waves of the sea shore.
- b** Natural disasters are caused by natural factors. The geographical position of a country, climate impacts, global warming i.e. the natural environment as a whole is liable for natural disaster. Geographical position, climate, soil structure, rivers and canals etc. are considered as the causes of natural disasters in Bangladesh.

- c** The seen disaster in the area visited by Abir is draught.

Sometimes the northern part of our country faces draught. We can take some precautions to face this situation. Ponds and canals can be excavated in these areas before the draught starts. We should take initiatives to reserve rain water as much as we can. We have to preserve some dry foods and save cash money for draught period. Foods should be preserved for livestock too. We can install some tube-wells in our own locality and select draught resisting crops to be cultivated in the draught prone areas.

The victim families should find out some alternative sources of income. People should be calculative in using water and livestock should be kept away from watersides. After the draught is over, organic fertilizers should be used instead of chemical fertilizers. Weeds and wild plants should be cleaned to avoid water misuse.

This time land should be cultivated in depth. Crops with long roots which can enter deep down the earth should be cultivated and more trees should be planted in the draught affected areas.

- d** The disaster mentioned in 'Event- 2' is flood and it makes the people life miserable.

Both natural and man-made disasters are terrible and destructive for any country or society. They cause serious damage to human life and economy of a country. Natural disasters occur more or less every year in Bangladesh. Flood is one of them. The floods of 1988, 2002, 2004, and 2009 were dreadful. These floods caused much destruction to the crops of farmers, their houses, cattles, trees, fish-farms, mills and factories, business-firms etc. Besides, houses and bio-diversity got destroyed due to flood. Every year 20 % area of our country is flooded by flood water. If it takes unusual shape, there is a threat that it may submerge 68% area. Women, children, old and disabled people are affected much by different types of disasters. Women play great role in preparing food, collecting water, caring dependent children and keeping the old people safe during and after the flood.

As a result, they face many obstacles to address these problems. Poor people of our country face great loss due to different types of disasters. Most of the people don't have the ability to encounter natural disasters due to poverty. Moreover, most of the poor people live in the disaster-prone areas. As a result, they become the primary victims to it.

**Ques. 07** In the Eid Vacation Mahfus, visiting his uncle's house in Moulovibazar saw that his uncle's house sank under river water and cattle floated away. He returned to town just having his life.

- What is disaster? 1
- What is meant by Green house effect? 2
- Which natural disaster is indicated in the stem? Explain. 3
- Which step can Mahfus' uncle take to minimize the losses in this disaster. Explain in light of your text. 4

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**Answer to Question No. 07 :**

**a** When any natural or man-made situation becomes unnatural and intolerable and as a result of which crops, asset and life are destroyed and environment is damaged, it is called disaster.

**b** Greenhouse is a kind of covering made of different types of gases. It works as heat maximiser. It creates a kind of covering or shield around the world. This layer absorbs heat from the sun and then scatters it on the surface of the globe. This is called green house effect.

**c** The disaster mentioned in 'Event- 2' is flood and it makes the people life miserable.

Both natural and man-made disasters are terrible and destructive for any country or society. They cause serious damage to human life and economy of a country. Natural disasters occur more or less every year in Bangladesh. Flood is one of them. The floods of 1988, 2002, 2004, and 2009 were dreadful. These floods caused much destruction to the crops of farmers, their houses, cattles, trees, fish-farms, mills and factories, business-firms etc. Besides, houses and bio-diversity got destroyed due to flood. Every year 20 % area of our country is flooded by flood water. If it takes unusual shape, there is a threat that it may submerge 68% area. Women, children, old and disabled people are affected much by different types of disasters. Women play great role in preparing food, collecting water, caring dependent children and keeping the old people safe during and after the flood.



As a result, they face many obstacles to address these problems. Poor people of our country face great loss due to different types of disasters. Most of the people don't have the ability to encounter natural disasters due to poverty. Moreover, most of the poor people live in the disaster-prone areas. As a result, they become the primary victims to it.

**c** Mahfus uncle could take the following steps to minimize the losses in the disaster —

- Using high lands as much as possible to build houses, and animal sheds.
- Building houses within embankments in river bank areas and within enclosures in costal areas.
- Planting bamboo, banana, dholkolmi, dhoinchha and similar trees around houses. They can defend currents of any flood to a large extent.
- Making an extra roof or platform inside every house and preserve food and other necessary items there. If flood or cyclone water enters inside the house, they are not damaged.
- Keeping some essential things such as chopper (da), cooking tool (khunti), axe (kural), spade (kodal), basket (jhuri), nylon ropes, bamboo mats, broken pieces of tin, portable oven (chula), radio, torch light and battery in possession.

**Ques. 08** Mr Rashed with his family went to visit a district located at coastal area. Knowing the possibility of great waves from the news on TV he left that place with his family. On the way he was stuck at a long traffic jam in an area because it was caught by fire.

- What is ozone layer? 1
- Explain the causes of formation of slums in Dhaka. 2
- Explain the first type of disaster in the stem. 3
- "Awareness is required to prevent the 2<sup>nd</sup> type of disaster of stem."— Analyse. 4

• Cumilla Board 2018

#### Answer to Question No. 08 :

**a** The layer which absorbs the ultra violet rays of the sun and saves the flora of the earth is called Ozone layer. This layer is extended up to 20 km.

**b** The present world is getting vrleanised. too rapidly. People are rushing to cities and towns for works. This is the main cause of formation of slums in Dhaka.

**c** The first type of disaster in the stem is 'Tsunami'. It is mainly a Japanese word which means waves of the sea shore. If there is any movement at the sea bed due to earthquake or volcanic eruption or any other reasons, massive waves are created throughout a large area. These waves dive on the coastal belt with strong current ranging from 800

to 1300 kilometres per hour. Due to Tsunami the water of the sea Tsunami turns into tidal bore and enters within 10 kilometres of the coastal belt with a huge speed as mentioned above. As a result, within a very short time houses and buildings, road or railways or other communications, electricity or business centres can be completely destroyed.

A huge Tsunami hit the north-east area of Japan in 2011. It was the result of an 8.9 Richter Scale earthquake under the sea. It hit an area which was 400 kilometres away from Tokyo the capital city of Japan. As a consequence, five nuclear electric plants in Japan were highly damaged. Radioactivity from these nuclear plants started spreading through air and water. It created huge health hazards for human beings. Thousands of railway commuters were missing and many ships drowned due to this disaster.

**d** The 2<sup>nd</sup> type of disaster of stem is 'Fire' and awareness is required to prevent this disaster.

Fire may take place as a natural disaster as well as a disaster caused by carelessness or an accident. Sometimes fire takes place at forests in many countries because of immense heat. It is called wildfire. It destroys forest resources as well as bio-diversity. Wildfire does not take place in our country. So we do not consider fire as a natural disaster. In Bangladesh, fire takes place due to carelessness or as fire accident. This accident usually takes place in mills and factories, oil refineries, garment industries, jute mills, chemical godowns, residential buildings, shops, offices, and commercial centers. Recently the fire caused from a chemical godown at Nimgali, Dhaka has taken away many lives leaving many people physically challenged. It is to note here that both in the rural and urban areas lack of consciousness is a prime factor for fire and often the sources of fire are burning ovens, lamps, mosquito coils, cigarettes and hurricanes (kerosene lamps) etc.

**Ques. 09** Incident-1 : Mr Rahmat lives in a coastal area. He has a fish farm. Fishery is no longer produced on that farm like before. Besides crops are being less produced in his cultivable land.

Incident-2 : Mr Ramij is a conscious citizen. He digs his pond deeply. He makes arrangement to set up a deep tubewell convincing the people of his locality. Again he inspires all to plant more and more trees.

- What is disaster? 1
- Why shouldn't people leave shelter center just after the cyclone stops? Explain. 2
- Which preparation is noticed in the activities of Mr Ramij? Explain. 3
- The result of the aspect of the environment that has affected the incident-1 is dreadful— Analyze. 4

• Chattogram Board 2018

**Answer to Question No. 10 :**

**a** When any natural or man-made situation becomes unnatural and intolerable and as a result of which crops, asset and life are destroyed and environment is damaged, it is called disaster.

**b** People shouldn't leave shelter center just after the cyclone stops because often there is a severe gust of storm after some time of the first attack. This reverse storm along with the tidal bore usually drives everything to sea.

**c** The preparation for preventing draught is noticed in the activities of Mr. Ramij.

Sometimes the northern part of our country faces draught. We can take some precautions to face this situation. Ponds and canals can be excavated in these areas before the draught starts. We should take initiatives to reserve rain water as much as we can. We have to preserve some dry foods and save cash money for draught period. Foods should be preserved for livestock too. We can install some tube-wells in our own locality and select draught resisting crops to be cultivated in the draught prone areas.

**d** The result of the aspect of the environment that has affected the incident-1 is dreadful. Here the disaster 'flood is indicated.'

The disaster mentioned in 'Event- 2' is flood and it makes the people life miserable.

Both natural and man-made disasters are terrible and destructive for any country or society. They cause serious damage to human life and economy of a country. Natural disasters occur more or less every year in Bangladesh. Flood is one of them. The floods of 1988, 2002, 2004, and 2009 were dreadful. These floods caused much destruction to the crops of farmers, their houses, cattles, trees, fish-farms, mills and factories, business-firms etc. Besides, houses and bio-diversity got destroyed due to flood. Every year 20 % area of our country is flooded by flood water. If it takes unusual shape, there is a threat that it may submerge 68% area. Women, children, old and disabled people are affected much by different types of disasters. Women play great role in preparing food, collecting water, caring dependent children and keeping the old people safe during and after the flood.

As a result, they face many obstacles to address these problems. Poor people of our country face great loss due to different types of disasters. Most of the people don't have the ability to encounter natural disasters due to poverty. Moreover, most of the poor people live in the disaster-prone areas. As a result, they become the primary victims to it.

**Ques. 11**

- a. What is the meaning of Tsunami? 1
- b. What do you mean by "Global warming"? 2
- c. Which natural disaster is indicated by the above picture? 3
- d. "Mass awareness is essential to face such disaster" — Analyze the statement. 4

• Rajshahi Board 2017

**Answer to Question No. 11 :**

**a** Tsunami is a natural disaster. The meaning of Tsunami is waves of the sea shore.

**b** The full name of HCFC is Hydro Chloro Fluoro Carbon.

**c** Natural disaster 'drought' is indicated by the above picture. Drought is a natural disaster. It is called due to water deficiency and shortage of rainfall. Sometimes the northern part of our country faces drought. The inhabitants and the farmers of those areas fall on great crisis because of drought. They can't grow sufficient crops. So, they live in hardship. Their normal life style is hampered. They look up upwards again and again to find out if rain will fall or not. If they find any of the sign of rain, their faces beam with smile.

**d** Mass awareness is essential to face such disaster. We can take some precautions to face this situation. Ponds and canals can be excavated in these areas before the drought starts. We should take initiatives to reserve rain water as much as we can. We have to preserve some dry foods and save cash money for drought period. Foods should be preserved for livestock too. We can install some tubewells in our own locality and select drought resisting crops to be cultivated in the drought prone areas.

The victims families should find out some alternative sources of income. People should be calculative in using water and livestock should be kept away from watersides. After the drought is over, organic fertilizers should be used instead of chemical fertilizers. Weeds and wild plants should be cleaned to avoid water misuse. The land should be cultivated in depth. Crops with long roots which can enter deep down the earth should be cultivated and more trees should be planted in the drought affected areas.



**Ques. 12** In the school, the classes were going on. At that time, suddenly, benches, chair and tables began to shake. Teacher told everyone to go out. Then all went out running.

- What is called land slide? 1
- Explain the main reason of global warming. 2
- What type of calamity has been hinted in the extract? Explain. 3
- What type of steps should be taken at the time of such type of calamity? Give your opinion. 4

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#### Answer to Question No. 12 :

a The sudden fall of a mass of earth from a hill or mountain is called landslide or land fall.

b The main elements of the air are nitrogen and oxygen. Besides, a little amount of carbon-di-oxide, methane, and nitrous oxide are also available in the air along with some vapour and ozone gas. These less important gases are called green house gas. Apart from these natural gases, few man-made gases such as HCFC (Hydro Chloro Fluoro Carbon), Halon, etc. are also called green house gas. Carbon-di-oxide has already increased 25% in the atmosphere. Similarly, nitrous oxide has increased 19% and mithen has increased 100%. These are the chief reasons of global warming.

c Earthquake has been hinted in the extract.

Among all the natural disasters of the world earthquake causes much havoc within a very short time. No advance news can be conveyed about earthquake. It turns a whole area into debris with a shake or some before human beings knowing anything about it. Generally massive, moderate or mild earthquake may occur several times at the same place. We have got evidence of it in the earthquakes of Iran, China, Mexico, Chile and Japan. Bangladesh is at the risk of earthquake. Particularly, Dhaka, Sylhet, Rangpur and Chittagong are the most risky zones. In recent times mild quakes often shake Chittagong and Sylhet. The quake that occurred on 18<sup>th</sup> September 2011 was quite severe. The whole country shivered with this. Man knows no means to prevent earthquake. But we can teach people to keep themselves safe during earthquake and give idea about rescue methods and relief works after the quake.

d The following steps should be taken at the time of earthquake.

Every house should have an emergency exit other than the main entrance. Moreover, there should be some first aid items, few helmets, and a torch light at each family. A strong table should be kept at

each house to take shelter underneath during the earthquake. Heavy furniture should be kept on the floor. All electric and gas connections should be switched off after use.

During earthquake we should take shelter beneath a strong table or any strong furniture. Without being upset we should stay at home until the quake stops completely. All electric and gas connections should be switched off immediately. If there is sufficient open space beside the homestead, shelter should be taken there immediately. should be asked drivers to stop vehicles instantly. We must not use any lift during this time.

After the earthquake is over, we should take injured persons to the nearest hospitals for treatment. We should do the best to participate in the rescue work. Measures should be taken to ensure temporary shelters, foods, and water for the distressed people.

**Ques. 13** Mr Harun lives in a village. It stands by the river. Oneday halt portion of the village goes under water of the river. More than hundreds of cows and goats died. Some men also lost their lives. All the resources of Harun went under the river water.

- What is the name of the closest layer of atmosphere on earth? 1
- What is meant by man-made disaster? 2
- Explain event of the stem that related to the problem of the text. 3
- Preparation and awareness can decrease the losses of the disaster stated in the stem— Analyze it. 4

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#### Answer to Question No. 13 :

a The name of the closest layer of atmosphere on earth is troposphere.

b A disastrous event caused directly and principally by one or more identifiable deliberate or negligent human actions is called man-made disaster. Man-made disasters are usually the result of things going wrong in our complex technological society. Such as, nuclear disaster, house fires, hazardous material spills, food and water contamination etc. Man made disasters can be both intentional and unintentional. It results in huge loss of life and property. It further affects a person's mental, physical and social well-being.

**c** The mentioned event of the stem that related to the problem of the text is 'river erosion'.

In the stem we find that Mr Harun lives in a village which is situated in a river side. One day half portion of the village goes under water of the river. More than hundreds of cows and goats died. Some men also lost their lives. All the resources of Harun went under the river water.

I think Mr Harun could somewhat save his property by selling if the river erosion was evident. Every year thousand of people in our country suffer much due to river erosion like Mr Harun.

**d** Preparation and awareness can decrease the losses of the disaster stated in the stem.

If there is any sign for river erosion, steps should be taken immediately to save life and resources. It is better to decide where to take shelter if there are symptoms for river erosion. We should shift children, elderly people, pregnant women, new mothers, and challenged persons either to safe places or to relatives. We should also shift livestock such as hens, ducks, cows, and goats to safe places. In this process, the valuable items of home and important documents should be shifted to safe places too. If river erosion is evident, better to sell out the trees, and vegetables at homesteads. The kitchen and animal shelter should be shifted to safe places beforehand. Even the living rooms should be shifted to safe places before the erosion is too close.

**Ques. 14** Torrential rain → strong current of mud → huge loss of life = Disaster 'A'.

Serious shaking → shaking of buildings and houses → huge loss of life and property = Disaster 'B'.

- |   |   |
|---|---|
| a. What is called the greenhouse gas?   | 1 |
| b. What is man-made disaster? Explain.  | 2 |
| c. Explain disaster 'A' of the stem.  | 3 |
| d. Do you think precautionary measures can reduce the loss of life and property? Give reasons in favour of your answer. | 4 |

• Barishal Board 2017

#### Answer to Question No. 14 :

**a** The main elements of the air are nitrogen and oxygen.

Besides, a little amount of carbon-di-oxide, methane, and nitrates oxide are also available in the air along with some vapour and ozone gas. These less important gases are called green house gas.

**b** A disastrous event caused directly and principally by one or more identifiable deliberate or negligent human actions is called man-made disaster. Man-made disasters are usually the result of things going wrong in our complex

technological society. Such as, nuclear disaster, house fires, hazardous material spills, food and water contamination etc. Man made disasters can be both intentional and unintentional. It results in huge loss of life and property. It further affects a person's mental, physical and social well-being.

**c** 'Cyclone' is indicated by the disaster 'A' of the stem. When the air of earth surface of a particular place becomes too hot, it blows upwards. As a result, air pressure of that place grows less. This is called low pressure. At this stage, air from the surrounding places rushes to that low pressure area with higher speed. This is called cyclone. Most of the cyclones in Bangladesh occur due to low pressure created in the Bay of Bengal. This kind of low pressure and storm in sea generate huge waves and the waves in their turn; inundate the landmass of coastal areas with great speed. This is called tidal wave. Cyclones and tidal waves have struck the coastal areas of Bangladesh several times. These have killed a lot many people and crops and cattle have been wiped away. Such a cyclone and tidal wave on 12 November 1970 in our coastal belt killed about a million people. Sidr and Aila are two examples of cyclones of the recent past. About three million people in 28 districts were affected by Sid'r on 15 November 2007. Aila caused havoc on 05 May 2009 destroying people, birds and animals crops and houses. Generally, the meteorological office forecasts about these cyclones and issue warnings to the people.

**d** Yes, I think precautionary measures can reduce the loss of life and property in case of disaster 'B' i.e. the earthquake.

Every house should have an emergency exit other than the main entrance. Moreover, there should be some first aid items, few helmets, and a torch light at each family. A strong table should be kept at each house to take shelter underneath during the earthquake time. Heavy furniture should be kept on the floor. All electric and gas connections should be switched off after use.

During earthquake we should take shelter beneath a strong table or any strong furniture. Without being upset we should stay at home until the quake stops completely. All electric and gas connections should be switched off immediately. If there is sufficient open space beside the homestead, shelter should be taken there immediately. Commuters should ask drivers to stop vehicles instantly. We must not use any lift during this time.

After the earthquake is over, we should take injured persons to the nearest hospitals for treatment. We should do the best to participate in the rescue work. Measures should be taken to ensure temporary shelters, foods, and water for the distressed people.




**Knowledge & Comprehension-based Q/A**

**Designed as per topic**

**Preparatory Knowledge-based Q/A**
**Question 1. What is called man-made disaster?**

[DB '19; DB '18]

**Ans.** Disasters that are happened due to the malpractices of human beings or their lack of prudence are called man-made disasters.

**Question 2. What is called wildfire?**

[RB '19; MB '19]

**Ans.** Sometimes fire takes place at forests in many countries due to extreme heat. It is called wildfire.

**Question 3. What is Tsunami? [CB '19; DjB '18; RB '17]**

**Ans.** Tsunami is a natural disaster. The word 'Tsunami' is a Japanese word that means waves of the seashore.

**Question 4. What is landslide?**

[SB '19]

**Ans.** The sudden fall of a mass of earth from a hill or mountain is called landslide or landfall.

**Question 5. What is ozone layer?**

[CB '18]

**Ans.** The layer which absorbs the ultra violet rays of the sun and saves the flora of the earth is called Ozone layer. This layer is extended up to 20 km.

**Question 6. What is greenhouse?**

[SB '18]

**Ans.** Greenhouse is a kind of covering made of different types of gases. It works a heat maximiser. It creates a kind of covering or shield around the world.

**Question 7. Write the full name of HCFC.**

[DB & DjB '17]

**Ans.** The full name of HCFC is Hydro Chloro Fluoro Carbon.

**Question 8. What is the full name of CFC? [JB '17]**

**Ans.** The full name of CFC is 'Chloro Fluoro Carbon'.

**Question 9. What is called land slide?**

[CB '17]

**Ans.** The sudden fall of a mass of earth from a hill or mountain is called landslide or land fall.

**Question 10. What is the name of the closest layer of atmosphere on earth?**

[CtgB '17]

**Ans.** The name of the closest layer of atmosphere on earth is troposphere.


**Preparatory Comprehension-based Q/A**
**Question 1. Why is the sign of desertification noticed in the northern part of Bangladesh? [DB '19]**

**Ans.** Due to global warming, the temperature of the earth is rising and the ultra violet rays of the sun also enter this world directly. This global warming is destroying the ecological balance. Consequently, it rains heavily in some places and sometimes there is no rain in other places. This is why, the sign of desertification is noticed in the northern part of Bangladesh.

**Question 2. Why should the natural disaster affected people be helped? [RB '19]**

**Ans.** Natural disaster affected people usually become helpless. In fact, they remain in shortage of food, pure drinking water. Their homes get damaged. Moreover, they lose heart. Then we should go forward to help them; we should provide them with food, pure drinking water, medicines and cash money to make their homes or to repair them. In fact, it is our moral duty to be by their side when people remain in danger.

**Question 3. Why are oceans compared with lungs?— Explain? [CB '19]**

**Ans.** The oceans are compared to the lungs of human body. They have significant roles in controlling world temperature. But it is a matter of sorrow that the oceans are now getting polluted as radioactive wastes are thrown there.

**Question 4. How does deforestation pollute the environment?— Explain. [CtgB '19]**

**Ans.** The green trees take in carbon-di-oxide from the environment and give off oxygen for us. But due to massive deforestation, the amount of oxygen is getting minimized and the amount of carbon-di-oxide is getting maximized in the air. As a result, the amount of harmful CFC gas rises up to damage the ozone layer and pollutes the environment.

**Question 5. Why does landslide happen?— Explain. [MB '19]**

**Ans.** The sudden fall of a mass of earth from a hill or mountain is called landslide or landfall. Hills composed of sand-stones or heavy mud may have landslide during intense rain or long time rain. It also takes place for massive deforestation and leveling of hills.

**Question 6. Bangladesh is in the risky area for earthquake— Explain. [DB '18]**

**Ans.** Bangladesh is at the risk of earthquake. Particularly Dhaka, Sylhet, Rangpur and Chittagong are in the most risky zones. In recent times mild quakes often shake Chittagong and Sylhet. The quake that occurred on 18<sup>th</sup> September 2011 was quite severe. The whole country shivered with this.

**Question 7. Explain a cause of natural disaster. [DjB '18; RB '18]**

**Ans.** Natural disasters are caused by natural factors. The geographical position of a country, climate impacts, global warming i.e. the natural environment as a whole is liable for natural disaster. Geographical position, climate, soil structure, rivers and canals etc. are considered as the causes of natural disasters in Bangladesh.

**Question 8. What is meant by Green house effect?** [JB '18]

**Ans.** Greenhouse is a kind of covering made of different types of gases. It works as heat maximiser. It creates a kind of covering or shield around the world. This layer absorbs heat from the sun and then scatters it on the surface of the globe. This is called green house effect.

**Question 9. Explain the causes of formation of slums in Dhaka.** [CB '18]

**Ans.** The present world is getting urbanised too rapidly. People are rushing to cities and towns for works. This is the main cause of formation of slums in Dhaka.

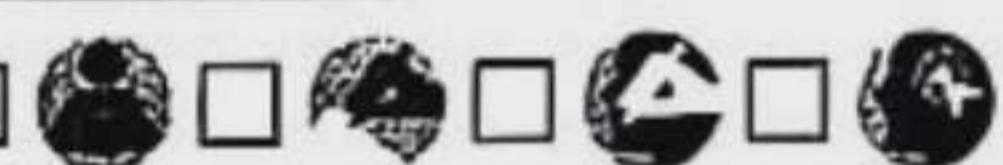
**Question 10. Why shouldn't people leave shelter center just after the cyclone stops? Explain.** [CtgB '18]

**Ans.** People shouldn't leave shelter center just after the cyclone stops because often there is a severe gust of storm after some time of the first attack. This reverse storm along with the tidal bore usually drives everything to sea.

**Question 11. What is meant by deforestation?**

[JB '17]

**Ans.** Deforestation refers to the cutting, clearing and removal of rainforest or related ecosystem into less bio-diverse ecosystem such as pasture crop land or plantations. Deforestation is one of the important factors of global warming. As a result of deforestation the amount of harmful CFC has risen up to damage the ozone layer.

**Solutions to Textual Activities****Along with textual reference****✓ Lesson 2 : The concept of global warming****Activity 01** **What are the causes of global warming?**

► Textbook Page 127

**Solution :** The causes of global warming are given below :

- Green house effect :** The main cause of global warming is green house gas. Here the green house gas has formed a layer around the globe. This layer absorbs heat from the sun and then scatters it on the surface of the globe. Thus the temperature of the world increases that is known as global warming.
- Use of luxury materials :** Household items such as refrigerator, air conditioner, plastic items, foam, aerosol, etc. produce a kind of green house gas. This is destroying the closest ozone layer troposphere of the atmosphere. Due to ozone layer's being destroyed, there is a rise of ultra violet ray in the earth surface. This too is a reason of global warming.
- Industrial waste of developed countries :** Besides, the developed countries are also liable for green house effect. They are destroying ecology by their increasingly high use of fossil fuel. This is another factor for green house gas. Not only that the industrial waste and black fumes produce loads of mercury, lead, and arsenic that too are liable for global warming.
- Hamper in the source of water :** The oceans are the lungs of the earth. They have significant roles in controlling world temperature. But they are gradually getting polluted as radioactive wastes are thrown there. It creates polluted vapour that mix up with the air and destroys the ozone layer.

e. **Deforestation :** Deforestation is another important factor of global warming. We know, the green trees take in carbon-di-oxide from the environment and leaves out oxygen for us. But due to massive deforestation, the amount of oxygen is getting minimized and the amount of carbon-di-oxide is maximised in the air. As a result, the amount of harmful CFC has risen up to damage the ozone layer.

f. **Urbanization and Industrialization :** The present world is getting urbanised too rapidly. People are rushing to cities and towns for work. Therefore, cities are getting overburdened with extra population. This huge population needs extra vehicles too. Emission of black fumes and carbon-di-oxide from these vehicles is also damaging the ozone layer which is the further cause of global warming.

g. **Use of chemicals and fertilizers :** In addition, artificial irrigation, use of chemical fertilizers and pesticides in agriculture have roles in damaging ozone layer which ultimately contribute to global warming.

**✓ Lesson 3 : The concept and kinds of disaster****Activity 02** **What is a natural disaster?**

► Textbook Page 127

**Solution :** When any natural accident or destruction hampers the normal flow of life, we call it natural disaster. Flood, cyclone, tidal bore, tornado, earthquake, draught, river erosion, tsunami, volcanic eruptions are some examples of natural disasters. It usually takes place as a consequence of a country's geographical location and climatic impacts.



**Activity 03** Mention 5 causes of human beings created disasters and another five causes for natural disasters. ▶ Textbook Page 127

**Solution :** Disasters that are created due to the mal practices of human beings or which are caused due to their lack of farsightedness is called human being created disasters. Such as : war, communal riot, deforestation, water logging desertification, fire, etc. On the other hand, when any natural accident or destruction hampers the normal flow of life, it is called natural disaster. Flood, cyclone, tidal bore, tornado, earthquake, draught, river erosion, tsunami, volcanic eruptions, etc. are natural disasters.

#### ✓ Lesson 6 : Causes of Natural Disaster

**Activity 04** Point out the cause-based natural disaster in the map of Bangladesh. ▶ Textbook Page 130

**Solution :** Try yourself with the help of your class teacher.

#### ✓ Lesson 8 : Duties and responsibilities during natural disasters

**Activity 05** According to you what measures should be taken to minimize the losses in flood? ▶ Textbook Page 137

**Solution :** We should take some necessary steps to minimize the loss in flood. We should—

- monitor water gain and loss regularly during the flood and be attentive to cyclone forecasts.
- Wrap household items with polythene or any other water resistant material and place them on extra roofs or platform inside the house. We must preserve one or two pitchers of water and preserve some dry food such as chira, muri, gur, etc. under the earth.

- Shift livestock such as cows, goats, hens and ducks, etc. to high lands.
- Take shelter in the nearest shelter centre. If there is no shelter centre, we will take shelter in the nearest high buildings, or schools or colleges or any other institutions.
- Take safe drinking water only. Water from any tube-well not submerged in flood water is safe for drinking. If necessary we will boil water properly, or use water purification tablets or potash alum (fitkiri) to have safe drinking water.
- Take special care for children. We will take extra care for ill, children, pregnant, and old people too.
- Use banana trees to make local rafts (vela) if there are no boats for communications.
- Take necessary steps to guard against infectious diseases.
- Take social measures to ensure security in shelter centres.
- Ensure latrine facilities and sewerage system in shelter centres.

**Activity 06** What will you do if there is any sudden earthquake? ▶ Textbook Page 137

**Solution :** If there is any sudden earthquake I will take shelter beneath a strong table or any strong furniture. I will stay at home until the quake stops completely. All electric and gas connections should be switched off immediately. If there is sufficient open space beside the home, I shall take shelter there immediately. I will not use any lift during the earthquakes. If I am in a bus, I shall ask the driver to stop driving.



## Super Suggestions



Super Suggestions with 100% preparatory questions selected by the Master Trainer Panel

Dear learners, important multiple choice, short, creative, knowledge & comprehension-based questions of this chapter selected by Master Trainer Panel for Half-Yearly and Annual Exams are presented below. Learn the answers to the mentioned questions well to ensure 100% preparation.

Question Pattern	7*	5*
MCQs with Answers	Learn each MCQs in this chapter thoroughly.	
Short Q/A	1, 2, 5, 8, 14, 19, 27, 30, 35, 41, 50	3, 4, 7, 10, 15, 17, 24, 31, 35, 38, 40, 43, 48, 52
Creative Q/A	1, 2, 4, 8, 12, 14	3, 6, 10
Knowledge-based Q/A	1, 2, 4, 8	3, 6, 9, 10
Comprehension-based Q/A	2, 3, 4, 6, 8	2, 7, 9

**Exclusive Tips** ► Master the solutions to all the activities in this chapter along with exercise and other Q/A to develop the creative thinking and assess your talent.



# Assessment & Evaluation



A question bank presented in the form  
of a class test to assess the preparation

## Class Test

Time : 3 hours

## Bangladesh & Global Studies

### Class : Eight

Full marks : 100

$1 \times 30 = 30$

[N.B. : Answer all the questions. Each question carries one mark. Block fully, with a ball-point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Multiple Choice Question Type Examination.]

1. Which is called heat maxi miser gas?  
Ⓐ Carbon-di-oxide Ⓑ Methane  
Ⓒ Green house gas Ⓒ Nitrogen
2. Which is the main reason of climate change?  
Ⓐ Global warming Ⓑ Chemical fertilizer  
Ⓒ Insecticides Ⓒ Growth of population
3. What is the closest layer to the earth in the atmosphere?  
Ⓐ Ozonosphere Ⓑ Mesosphere  
Ⓒ Stratosphere Ⓒ Troposphere
4. Which countries use maximum fossil fuel?  
Ⓐ Undeveloped Ⓑ Developed  
Ⓒ Developing Ⓒ Less developing
5. Which layer of air does absorb the ultraviolet ray from the sun?  
Ⓐ Troposphere Ⓑ Tratosphere  
Ⓒ Ozone layer Ⓒ Lethosphere
6. What is the average height in km. of Troposphere from sea-level?  
Ⓐ 25 Ⓑ 20 Ⓒ 19 Ⓓ 12
7. Which one of the following produces HCFC gas?  
Ⓐ Refrigerator Ⓑ Motor car  
Ⓒ Smoke from industries Ⓒ Diesel driven engine
8. What is called the ocean of the earth?  
Ⓐ Lungs Ⓑ Soul  
Ⓒ Life Ⓒ Store house
9. Because of which is the environment seriously endangered?  
Ⓐ Industrialization Ⓑ Urbanization  
Ⓒ Globalization Ⓒ Warming
10. Which is responsible for cancer and skin disease in human body?  
Ⓐ Arsenic Ⓑ Ozone gas  
Ⓒ Ultraviolet ray Ⓒ Nitrous oxide
11. The oceans are compared with which organ of human body?  
Ⓐ Heart Ⓑ Brain Ⓒ Lung Ⓓ Liver
12. Which one is the man-made gas?  
Ⓐ Halon Ⓑ Mithane  
Ⓒ Carbon-di-oxide Ⓒ Nitrogen
13. Oceans are considered as the which part of human body of the earth?  
Ⓐ Lungs Ⓑ Heart  
Ⓒ Driving force Ⓒ Frame
14. What is the meaning of the term Tsunami?  
Ⓐ River wave Ⓑ Lake wave  
Ⓒ Wave at sea shore Ⓒ Sea wave
15. Tsunami is a — word.  
Ⓐ French Ⓑ Japanese Ⓒ English Ⓓ German
16. Landslide takes place —.  
Ⓐ flood Ⓑ cyclone  
Ⓒ tornado Ⓒ heavy rainfall
17. What type of disaster is Tsunami?  
Ⓐ Natural Ⓑ Manmade  
Ⓒ Geographical Ⓒ Geological

18. Erosion of soil from the hill is known as what?  
Ⓐ Hill erosion Ⓑ Landslide  
Ⓒ Tsunami Ⓒ Earthquake
19. Fire out breaks due to —.  
i. natural cause  
ii. social cause  
iii. man made cause  
Which one is correct?  
Ⓐ i & iii Ⓑ i & ii Ⓒ ii & iii Ⓓ i, ii & iii
20. Read the passage below and answer to the question No. 20 :  
Last year Mr. Iqbal felt a heavy shake while staying a hotel in Cox's bazar. After the shock the manager of the hotel made him careful about another disaster.
21. About which disaster did the authority make him careful?  
Ⓐ Cyclone Ⓑ Flood Ⓒ Tsunami Ⓓ Tornado
22. Which is the drought prone region of Bangladesh?  
Ⓐ Khulna Ⓑ Cumilla Ⓒ Rangpur Ⓓ Barishal
23. How many percentage of total land area of Bangladesh is flooded every year?  
Ⓐ 10 Ⓑ 15 Ⓒ 20 Ⓓ 30
24. After hearing which number of alarming signal it needs to shift the children, old people and women to shelter centres?  
Ⓐ 2 Ⓑ 3 Ⓒ 4 Ⓓ 5
25. Which gas increased the most in the atmosphere in the last one century?  
Ⓐ Ozone Ⓑ Halon  
Ⓒ Methane Ⓒ Carbon-di-oxide
26. What is the cause of the environment becoming dangerously threatened?  
Ⓐ Warming Ⓑ Cold wave  
Ⓒ Fog Ⓒ Earthquake
27. Which one is a manmade gas?  
Ⓐ Methane Ⓑ Halon  
Ⓒ Nitrous oxide Ⓒ Carbon-di-oxide
28. What is the nearest level of the surface?  
Ⓐ Mesosphere Ⓑ Thermosphere  
Ⓒ Ozone layer Ⓒ Tropsosphere
29. In the last one century what amount of Methane has increased?  
Ⓐ 100% Ⓑ 50% Ⓒ 25% Ⓓ 19%
30. Which of the following is most responsible for environmental pollution?  
Ⓐ Use of pesticides Ⓑ Black fume of industry  
Ⓒ Radioactive wastes Ⓒ Deforestation
31. Generally which disaster occurs due to intense and long time rainfall?  
Ⓐ Tsunami Ⓑ Cyclone  
Ⓒ Earthquake Ⓒ Landslide

## Answer Sheet ▶ Multiple Choice Questions

1	Ⓒ	2	Ⓐ	3	Ⓐ	4	Ⓑ	5	Ⓒ	6	Ⓓ	7	Ⓐ	8	Ⓐ	9	Ⓐ	10	Ⓒ	11	Ⓒ	12	Ⓐ	13	Ⓐ	14	Ⓒ	15	Ⓑ
16	Ⓓ	17	Ⓐ	18	Ⓑ	19	Ⓐ	20	Ⓒ	21	Ⓒ	22	Ⓒ	23	Ⓓ	24	Ⓒ	25	Ⓐ	26	Ⓓ	27	Ⓓ	28	Ⓐ	29	Ⓓ	30	Ⓓ



**Short-Answer Question** (Each question carries 2 marks)**Answer any 10 of the following questions :** $2 \times 10 = 20$ 

1. Write the effects of climate change.
2. Mention the causes of natural disasters in Bangladesh.
3. What do you mean by 'greenhouse effect'?
4. Write what you know about 'greenhouse gases'.
5. What is the increase in greenhouse gases in the last century?
6. Write about the function of the ozone layer.
7. Mention some of the causes of global warming.

8. What do you mean by 'carbon-di-oxide'?
9. What do you mean by natural disaster?
10. What diseases do humans get due to warming?
11. How many types of disasters are there?
12. Give five examples of natural and man-made disasters.
13. What do you mean by fire or wildfire?
14. Write the sources of fire in Bangladesh.
15. Write about the soil structure of Bangladesh.

**Creative Question** (Each question carries 10 marks) $10 \times 5 = 50$ **Answer any 5 of the following questions :**

1. While reading Mila suddenly noticed that her reading table was vibrating. She went under the table instantly. Mila's friend Rubi went to visit her paternal grandfather's house in her summer vacation. She went out side in the afternoon and saw that the soil of the crop fields were being dried and cracked. His grandfather was worried to think about not having any crop this year.
  - a. What is called man-made disaster? 1
  - b. Why is the sign of desertification noticed in the northern part of Bangladesh? 2
  - c. By which disaster has Mila been attracted?— Explain. 3
  - d. Analyze the preventive measures of the disaster by which Rubi's grandfather was affected. 4
2. Mr. Rakib went to visit Sylhet along with his family. But when heavy rain full started being afraid of a disaster he left that place. On the way to return he was stuck at a traffic jam caused by fire conflagration at a market.
  - a. What is Tsunami? 1
  - b. Why are oceans compared with lungs?— Explain? 2
  - c. Which disaster is indicated at the first part of the stem?— Explain. 3
  - d. "Awareness is required to prevent the 2nd disaster as described in the stem."— Analyze. 4
3. Sabbir and Sohan are two friends. Sabbir is from Patuakhali and Sohan is from Gaibandha districts. Both of their areas, bad impacts are seen on the life style of the people. Area of Sabbir often goes under saline water. On the other hand no rainfall is evident even in rainy season in the area of Sohan. Farmers could not cultivate due to lack of water.
  - a. What is called natural disaster? 1
  - b. Explain the main cause of global warming. 2
  - c. Explain the dos to face of disaster of Sohan's area. 3
  - d. Analyze the relation between destroying trees and damage of crops in Sabbir's area and the mentioned disaster. 4
4. Event-1 : Abir a boy of Rajshahi went to a crop field in the month of May and saw that the crops of many places became dried up and the ground became grind.  
Event-2 : In recent rainy season many districts of Sylhet submerged under water and the life of the people became miserable.
  - a. What is Tsunami? 1
  - b. Explain a cause of natural disaster. 2

- c. Explain the steps of confront the disaster that was seen in the area, visited by Abir. 3
- d. The disaster mentioned in 'Event-2' makes the people's life miserable. Analyse. 4
5. In the Eid Vacation Mahfus, visiting his uncle's house in Moulovibazar saw that his uncles house sank under river water and cattle floated away. He returned to town just having his life.
  - a. What is disaster? 1
  - b. What is meant by Green house effect? 2
  - c. Which natural disaster is indicated in the stem? Explain. 3
  - d. Which step can Mahfus' uncle take to minimize the losses in this disaster. Explain in light of your text. 4
6. Mr Rashed with his family went to visit a district located at coastal area. Knowing the possibility of great waves from the news on TV he left that place with his family. On the way he was stuck at a long traffic jam in an area because it was caught by fire.
  - a. What is ozone layer? 1
  - b. Explain the causes of formation of slums in Dhaka. 2
  - c. Explain the first type of disaster in the stem. 3
  - d. "Awareness is required to prevent the 2<sup>nd</sup> type of disaster of stem."— Analyse. 4
7. In the school, the classes were going on. At that time, suddenly, benches, chair and tables began to shake. Teacher told everyone to go out. Then all went out running.
  - a. What is called land slide? 1
  - b. Explain the main reason of global warming. 2
  - c. What type of calamity has been hinted in the extract? Explain. 3
  - d. What type of steps should be taken at the time of such type of calamity? Give your opinion. 4
8. Torrential rain → strong current of mud → huge loss of life = Disaster 'A'.  
Serious shaking → shaking of buildings and houses → huge loss of life and property = Disaster 'B'.
  - a. What is called the greenhouse gas? 1
  - b. What is man-made disaster? Explain. 2
  - c. Explain disaster 'A' of the stem. 3
  - d. Do you think precautionary measures can reduce the loss of life and property? Give reasons in favour of your answer. 4

**Answering Reference ► Short-Answer Questions**

- |                                |                                |                                 |                                 |
|--------------------------------|--------------------------------|---------------------------------|---------------------------------|
| 1 ► See this Chapter, Ques. 02 | 5 ► See this Chapter, Ques. 10 | 9 ► See this Chapter, Ques. 21  | 13 ► See this Chapter, Ques. 33 |
| 2 ► See this Chapter, Ques. 03 | 6 ► See this Chapter, Ques. 12 | 10 ► See this Chapter, Ques. 23 | 14 ► See this Chapter, Ques. 34 |
| 3 ► See this Chapter, Ques. 05 | 7 ► See this Chapter, Ques. 14 | 11 ► See this Chapter, Ques. 25 | 15 ► See this Chapter, Ques. 36 |
| 4 ► See this Chapter, Ques. 08 | 8 ► See this Chapter, Ques. 17 | 12 ► See this Chapter, Ques. 27 |                                 |

**Answering Reference ► Creative Questions**

- |                                |                                |                                |                                |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 1 ► See this Chapter, Ques. 01 | 3 ► See this Chapter, Ques. 05 | 5 ► See this Chapter, Ques. 07 | 7 ► See this Chapter, Ques. 12 |
| 2 ► See this Chapter, Ques. 02 | 4 ► See this Chapter, Ques. 06 | 6 ► See this Chapter, Ques. 08 | 8 ► See this Chapter, Ques. 14 |