

Roll No.

Total Printed Pages - 9

F - 1066

**M.Sc. (Fourth Semester)
EXAMINATION, MAY-JUNE, 2022
ENVIRONMENTAL SCIENCE
Paper Second
(Environmental Disaster and Risk)**

Time : Three Hours]

[Maximum Marks:80

[Minimum Pass Marks: 16

Section-A

(Multiple Choice Type Questions)

(1 mark each)

Note : Attempt all the questions.

1. What is a hazard?

- (A) Something that can cause harm or injury to a person/people.
- (B) A purposeful assessment of the environment
- (C) Something that requires control measure
- (D) None of the above

[2]

2. What is a risk?

- (A) The management of the environment
- (B) The probability of an accident happening
- (C) The likelihood of someone being harmed or injured as a result of a hazard
- (D) None of the above

3. From disaster mitigation measures given below, identify the measures which can be characterized as non-structural?

- 1. Flood dykes
- 2. Land-use zoning
- 3. Raising of homes in flood-prone areas
- 4. Insurance programs
- 5. Reinforce cyclone safe rooms

- (A) 2 and 4 only
- (B) 1, 2 and 4 only
- (C) 2, 4 and 5 only
- (D) 1, 2, 4 and 5 only

4. National Disaster Management Authority is headed by?

- (A) The Prime Minister
- (B) The Home Minister
- (C) The President
- (D) The Health Minister

P.T.O.

F - 1066

[3]

5. Vulnerability analysis comes in which part of the Disaster Management Cycle?
- (A) Preparedness
 - (B) Mitigation
 - (C) Response
 - (D) Recovery
6. What is the range of the intensity scale used in measuring earthquakes?
- (A) 1 to 12
 - (B) 1 to 7
 - (C) 1 to 15
 - (D) 1 to 5
7. Consider the following terms -
1. Lightning 2. Landslide 3. Thundering 4. Tsunami
5. Floods.
Earthquake can cause
- (A) 2, 4 and 5
 - (B) 1, 2 and 3
 - (C) 2 only
 - (D) 2 and 5
8. _____ is the device used to detect landslides -
- (A) Vibration sensor
 - (B) Piezo-electric crystal
 - (C) Strain gauge
 - (D) Proximity sensor

F - 1066

P.T.O.

[4]

9. _____ is a downward movement of wet soil along the slopes under the influence of gravity
- (A) Creep
 - (B) Lahars
 - (C) Debris flow
 - (D) Solifluction
10. Which nation in the world has the most historically active volcanoes?
- (A) The United States of America
 - (B) Italy
 - (C) Mexico
 - (D) Indonesia
11. How many feet of fast moving water can sweep a vehicle away?
- (A) 4 feet
 - (B) 3 feet
 - (C) 2 feet
 - (D) 1 foot
12. What is flash flood?
- (A) A sophisticated flood
 - (B) Power lines fallen in flood
 - (C) A deep flood
 - (D) A flood that happens fast with little warning

F - 1066

[5]

13. Match List- I with List- II and select the correct answer using the codes given below-

List-I	List-II
(Tropical Cyclones)	(Country)
I. Baguio	1. Australia
II. Hurricanes	2. China
III. Typhoons	3. Philippines
IV. Willy-Willies	4. USA

- (A) 1 3, II 4, III 1, IV 2
- (B) 1 3, II 4, III 2, IV 1
- (C) 1 2, II 3, III 4, IV 1
- (D) 1 2, II 1, III 3, IV 4

14. The low pressure area at the centre of a cyclone is known as the

- (A) Epicenter
- (B) Fault
- (C) Midpoint
- (D) Eye

15. Consider the following statements:

Assertion (A) : The eastern coast of India is affected by tropical cyclones more than the western coast of India.

Reason (R) : Tropical cyclones originate only in the Bay of Bengal.

Select the correct answer from the options given below:

- (A) Both A and R are true and R is the correct explanation of A.
- (B) Both A and R are true but R is not the correct explanation of A.
- (C) A is true but R is false
- (D) A is false but R is true

F - 1066

P.T.O.

[6]

16. Identify the CORRECT statement about cyclones-

- (A) High speed winds circulate around a high pressure zone
- (B) The coastline of India is not vulnerable to cyclones
- (C) The wind direction is clockwise in southern hemisphere and anticlockwise in northern hemisphere
- (D) The wind direction is clockwise in both the hemispheres

17. Which of the following is the consequence of industrial pollution?

- (A) Increase in the water level in seas
- (B) Releases of the hazardous radiations
- (C) Increase in the animals in forests.
- (D) Global warming

18. Which one of the following industries produced Sulfur dioxide and flu ash as pollutants?

- (A) Textile industries
- (B) Cottage industries
- (C) Thermal industries
- (D) Coal industries

F - 1066

[7]

19. Which one of the following is a mechanical means of treating industrial effluents?

- (A) Oxidation
- (B) Chlorination
- (C) Recycling of waste
- (D) Sedimentation

20. The water is deprived of oxygen by decomposition of dead algae is known as?

- (A) Eutrophication
- (B) Decomposition
- (C) Transpiration
- (D) Aeration

Section-B

(Very Short Answer Type Questions)

(2 marks each)

Note : Attempt all the questions. Write the answer in 2-3 sentences.

1. What do you mean by disaster?
2. What are the causes of human-induced hazards?
3. How are the earthquakes of non-tectonic origin caused?

F - 1066

P.T.O.

[8]

4. Name the factors on which the intensity of storm waves of a cyclone depends.

5. How does flood occur?

6. What is the biggest source of hazardous waste?

7. What are elementary neutralization units?

8. Which chemical is responsible for Minamata?

Section-C

(Short Answer Type Questions)

(3 marks each)

Note : Attempt all the questions. Write the answer in 75 words.

1. Disaster Management Cycle (Diagram only).
2. What is Hazard Zoning Map?
3. What causes a landslide?
4. What is Seismic Zone Map?
5. How do earthquakes generate tsunamis?
6. What are the types of cyclones?
7. What is biohazard remediation?
8. What are recommended guidelines for hazmat-incident contingency plans?

F - 1066

[9]

Section-D

(Long Answer Type Questions)

(5 marks each)

Note : Attempt all the questions. Write the answer in 150 words.

1. Discuss about the Public policy for hazard management.
2. Describe about the active volcanic belts in the world.
3. Describe how treatment of watershed can be useful for flood management.
4. Describe about the Concept of Soil waste management.