

Disaster Management Class 01

19th June, 2024 at 1:00 PM

GENERAL DISCUSSION ABOUT DISASTERS AND INTRODUCTION (01:07 PM)

- *Looking at PYQs and discussion around them to get an idea of the topics.*

DISASTER MANAGEMENT PYQ DISCUSSION (01:27 PM)

- *Discussion of PYQs of Disaster Management*
- *2011 - NDMA - Its National Executive Committee*
- *2013 - Disaster and pre-disaster management. Keywords - vulnerability and risk assessment.*
- *2014 - Preparedness, El Nino and La Nina events.*
- *2015 - Important Words - Earthquakes, Preparedness, Mitigating, significant gaps. Keywords - Preparedness, mitigation, and the gaps in it.*
- *2016 - Important words - Urban floods, high-intensity rainfall, Keywords - Reasons for urban floods, the mechanism for preparedness to reduce risk.*
- *2017 - Keywords - Tsunami, NDMA guidelines, Preparedness to reduce risk, cause, and factors responsible.*
- *2018 - Important words - Measures taken by India for DRR, before signing the Sendai Framework, Different from the Hyogo Framework. Keywords - Disaster Risk Reduction, Sendai Framework, and Hyogo Framework.*
- *2019 - Important words - Vulnerability. How and in what ways can vulnerability to disasters be characterized?*
- *2020 - Keywords - Preparedness, Disaster management, Hazard zonation mapping, disaster mitigation in case of landslides.*
- *2020 - Important words - Disaster management, earlier reactive approach. Keywords - Disaster management, Reactive approach.*
- *2021 - Keywords - Vulnerability, Earthquake, hazards zonation mapping.*
- *2022 - Keywords - Hazard, Coastal Management Techniques.*
- *2023 - Keywords - Dam Failures, life and property, causes of dam failure.*

DISASTER AND DISASTER MANAGEMENT (02:34 PM)

- *Under this, we shall be studying - 1) Geographical Events, Natural and Man-made; 2) Concepts; 3) Structure - Indian and International Structures for Disaster Management*
- *Concepts -*
- *1) Hazard;*
- *2) Vulnerability;*
- *3) Risk;*
- *4) Disaster;*
- *5) Management. A proactive approach to Disaster management deals with Pre-Disaster. Post-disaster is a reactive approach and fits in Post-Disaster. Mitigation is a Pre-Disaster scenario.*

HAZARD (03:02 PM)

- *Hazard has the potential to cause harm if not used properly. When we use the word hazard and disaster management, we broadly classify it as events that have a higher potential of causing harm and they can be classified into natural hazards or man-made hazards.*

Natural Hazards (03:17 PM)

- There are 5 categories of natural hazards. These are-
- 1) Geophysical Disasters - Earthquake/ Mass movement of earth materials -

Family	Main Event	Short Description/Secondary Disaster
1) Geophysical	Earthquake/Mass movement	<p>Landslide following earthquake;</p> <ul style="list-style-type: none"> • Urban fires triggered by earthquakes; • Liquefaction - the transformation of (partially) water-saturated soil from a solid state to a liquid state caused by an earthquake. <p>- Mass movement of earth materials, usually down slopes</p> <p>Surface displacement of earthen materials due to ground shaking triggered by volcanic eruptions</p>
	Volcano	<p>A type of geological event near an opening/vent in the Earth's surface including volcanic eruptions of lava, ash, gas, hot vapor, and pyroclastic material.</p>
	Tsunami	<p>Tsunamis are difficult to categorize they are essentially an oceanic process manifested as a coastal water-related hazard. Tsunami waves travel at very high speed across the ocean but as they begin to reach shallow water they slow down, and the wave grows steeper.</p>
		<p>Avalanche, a large mass of loosened earth material, snow, or ice that slides, flows or falls rapidly down a mountainside under the force of gravity</p>
2) Hydrological	<ul style="list-style-type: none"> - Flood • Landslides • Wave Action 	<p>Coastal Erosion - The temporary or permanent loss of sediments or landmass in coastal margins due to the action of waves, tides, or anthropogenic activities.</p> <p>Flash Flood Hydrological - Heavy or excessive rainfall in a short period of time produces immediate runoff,</p>

		creating flooding conditions within minutes or a few hours.
		Cyclone, Storm Surge, Tornado, Convective Storm, Extra-Tropical Storm, Wind
3)	Hazard is caused by short-lived, micro- to mesoscale extreme weather	Cold Wave, Derecho
Meteorological	and atmospheric conditions that may last from minutes to days.	Extreme Temperature, Fog, Frost, Freeze, Hail, Heatwave
		Lightning, Heavy rain
		Sandstorm, Dust-storm
		Snow, Ice, Winter Storm, Blizzard
4)	Unusual, extreme weather conditions related to long-lived, meso to macro-scale atmospheric processes ranging from intra-seasonal to multi-decadal climate variability.	Drought
Climatological		Extreme hot/cold conditions
		Forest/Wildfire fires
		GLOF
		Subsidence
5) Biological	Exposure to germs and toxic substances	Epidemics: viral, bacterial, parasitic, fungal or prion infections
		Insect infestations
		Animal Stampedes.

VULNERABILITY (03:43 PM)

- *Hazard is with respect to the factors causing the effect whereas vulnerability is with respect to the affected by the hazardous event.*
- *Vulnerability includes the effect on life, property, and environment.*
- *Vulnerability is the characteristics and circumstances of a community, asset, or environment that make it susceptible to the damaging effects of a hazard.*

Factors Increasing Vulnerability (03:56 PM)

- *1) Rapid population growth*
- *2) Spread of humans to all corners of the earth*
- *3) Degradation of the environment*
- *4) Agriculture*
- *5) Industrialisation and Urbanisation*
- *6) Deforestation*
- *7) Mining*
- *8) Services like transportation*
- *9) Creation of a large population of poor - poor living conditions*
- *10) Blind adherence to cultural practices*
- *11) War and internal security problems*
- *12) Gender inequality*
- *13) Lack of awareness and lack of development planning*

TOPIC FOR NEXT CLASS - TYPES OF VULNERABILITY