

**GS Advanced Program 2023****Generic Booklet**Test Name/Code/No. : **36**.....

Name

Email ID.

Roll No.

Mobile No.

Allotted Time : 60 Minutes**Instructions to Candidates -**

- There are 7 Questions in this Question paper.
- All Questions are Compulsory.
- For all updates, please visit the noticeboard -
<https://noticeboard.forumias.com/gsap-2023/>

Important -

- Answers must be attempted in the QCA Booklet only.
- To upload the Answer Copies please visit to "My Course" section on -
<https://academy.forumias.com/>
- Only those copies will be evaluated which will be submitted before the next class.

Q. No.	Grade/Score
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Overall Grade/Score	

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Q.1) Give an account of how technology was sought to aid the management of pandemic.

Ans → Covid-19 pandemic is one of the worst humanitarian crisis in recent history, which brought almost all the countries to standstill and had impacts on social, economic, ^{environment} political spheres. However, Advancement in technology helped us to manage the pandemic & its ill-effects.

Role of technology in Mgmt. of pandemic

* Covid-19 tools (ACT) accelerator.

↳ pioneering international teamwork to fast-track development, production & access to tests, treatment & vaccines.

* 'Aarogya Setu' & Co-WIN App

↳ developed to bring people together utilizing blue-tooth technology & Artificial Intelligence

↳ App used for information sharing - distribution

↳ Reduce wastage of vaccines

* MyGov Helpline — Outreach & Engagement

- * Enabling Distance learning for students
 - ↳ helped students & teachers to interact & ensuring less interruption to education
 - * Online Entertainment
 - ↳ necessary to remove stress
 - ↳ supported people in lockdown
 - ② - Netflix, youtube, OTT etc
 - * Contactless delivery of Essentials.
 - ↳ Technology ensured delivery of medicine, groceries etc.
 - * WFH (facility) to employees
 - ↳ made sure smooth running of businesses enabled by IT.
 - * RT-PCR Tests, Indigenous ventilators.
 - * PM - evidya, Diksha platforms
- Technology innovations in fields like bio-sciences communication, health etc. helped in tackling epidemic in timely & systematic manner. It also generated new opportunities for economic & social development.

Overall Grading (✓)

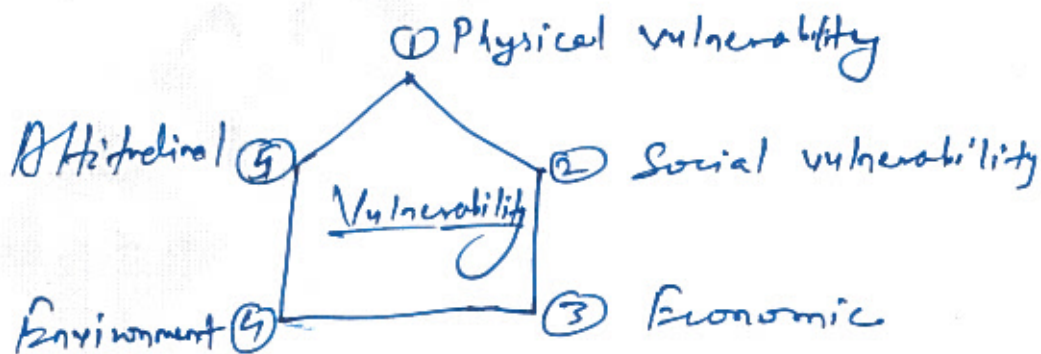
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Q.2) How and in what ways can vulnerability to disasters be characterized? Discuss different types of vulnerability with reference to disasters.

Ans! → Vulnerability is the inability to resist a hazard or to respond when a disaster has occurred. Ex! - People living near riverside are more vulnerable to floods than people living in higher regions.

Vulnerability assessment needs to be based on systematization and conceptualization of vulnerability describing the main linkages between different components of risk.

Types of Vulnerability



① Physical: — depends on geographical proximity & physical environment to source & origin of disasters

(ex) Area near coast lines, unstable hills are more vulnerable to disasters.

- (2) Social → refers to inability of people, community, organization & societies to withstand adverse impacts.
- Ex - Children, senior citizen, poor & distressed villages are more vulnerable to floods.
- (3) Economic → dependent on economic status of individuals, communities or nations.
- Ex - poor people living in slums are more vulnerable to disease.
- (4) Environment → Natural resource depletion & resource degradation are key aspects.
- Ex - wetland sensitive to high salinity from sea-water & water pollution.
- (5) Attitudinal → -ve attitude towards change and lack in initiatives make people or community more vulnerable.
- Ex - Disunity & individualism affects Disaster response.

Knowing the vulnerability beforehand makes mitigation, preparedness & response to disaster effective & efficient & impacts gets reduced.

Overall Grading (✓)

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Q.3) Describe various measures taken in India for Disaster Risk reduction (DRR) before and after signing 'Sendai framework for DRR (2015-2030)'. How is this different from 'Hyogo framework'.

Ans! → India due to its geography, high population and scarce resources remain prone to disasters. Managing disasters remain a huge challenge as it involves a continuous & integrated process of planning, organizing, coordinating and implementing measures.

Steps taken by India

* Before signing 'Sendai framework'

(1) National Disaster Management Act 2005

↳ paradigm shift from relief-centric approach to proactive approach
↳ Emphasis on preparedness, prevention & mitigation as well



(a) Establishment of National Disaster Management Authority (NDMA) with PM as chairperson.

(b) National Executive Committee to assist NDMA

(2) National policy on Disaster Management 2009

↳ to build a safe & disaster resilient India.

* Holistic & Integrated approach :- Theme
Community based - last mile
integration

Capacity Development
Consolidation & Cooperation

* After signing 'Sendai framework'

(1) 2016 → National disaster Management Plan
↳ Blue print for reducing losses

(2) adoption of Sendai framework &
drawn a national & local strategy for 2020.

Difference Betn Hyogo framework & Sendai framework

* Sendai framework is successor instrument to
↓ [2015-30] Hyogo framework [2005-15]

* It provides member states with concrete
actions to protect development gains from
risk of disaster

* works hand in hand with other agendas

* recognizes states having primary role to reduce
disaster risk

India is taking lead role in strengthening
systems, machinery to reduce disaster impacts
& prevention with exchange of ideas & information.

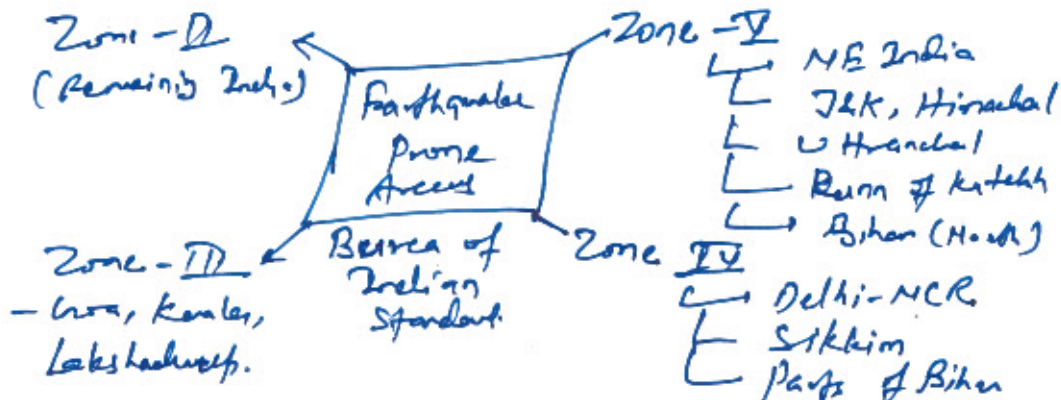
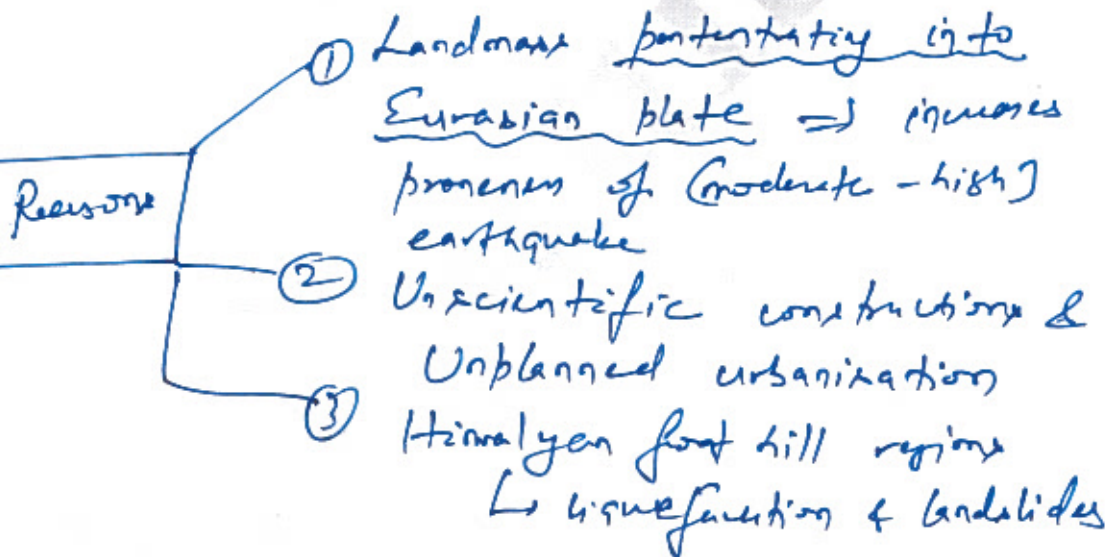
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Q.4) Discuss about vulnerability of India to earthquake related hazards. Give examples including the salient features of major disasters caused by earthquakes in diff parts of India during last 3 decades.

Ans. → An earthquake is the shaking of the surface of earth resulting from sudden release of energy that creates seismic waves.
59% of India's land can face moderate to severe earthquakes.

India's vulnerability to earthquakes



Major Earthquake Disasters

- * 1999 - Chamoli → Caused by thrust fault (UP) → Resulted in landslides, surface rupture & disconnected valleys
- * 2001 - Bhuj → Reactivated fault → loss of life & property
- * 2004 - Indian ocean Tsunami → created by seismic activity → massive waves - flooded coastal areas causing long-term changes.
- * 2005 - Kashmir → Severe upthrust of Indian plate against Eurasian plate → Disruption of Infrastructure & Communication.

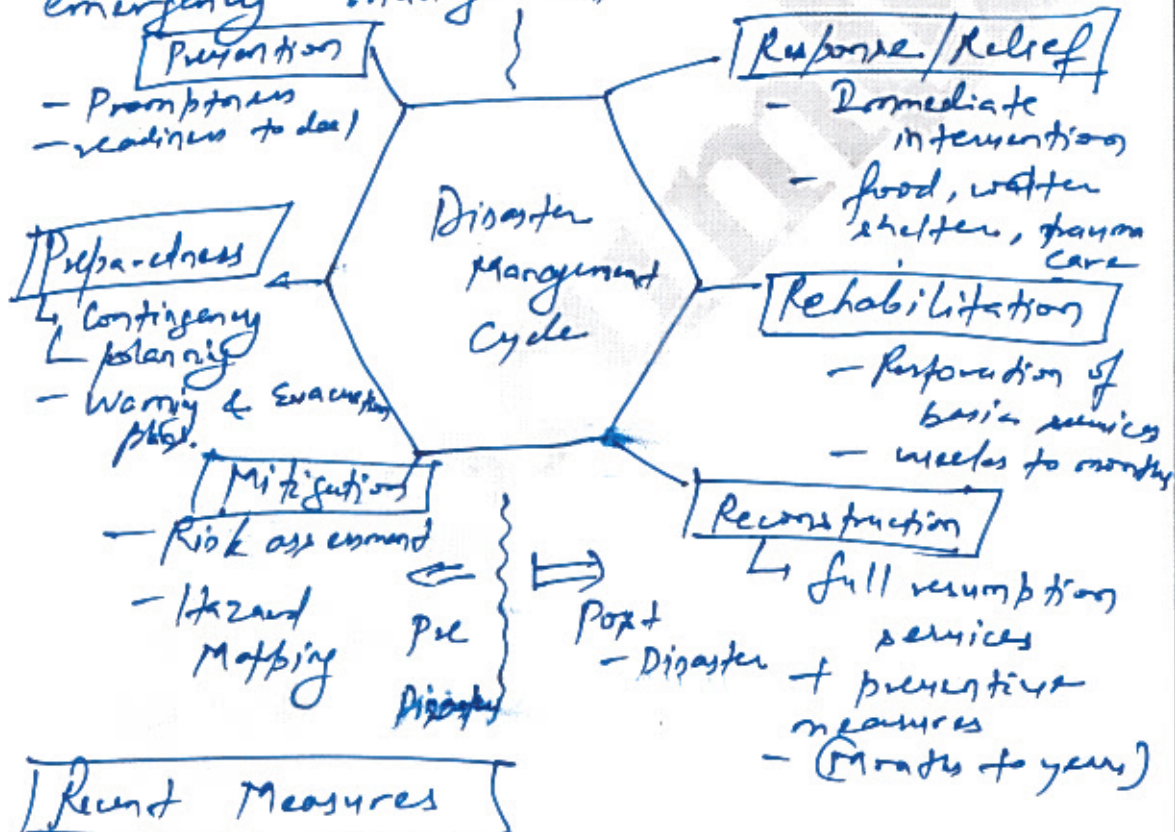
Earthquakes in India is a regular phenomenon but still we have not found a way to earthquake safety of regions. Creating a efficient disaster response & mitigation system & culture of building safe houses is an absolute necessity.

Overall Grading (✓)

Poor			Average			Good		
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Q.5) Discuss the recent measures initiated in disaster mgmt. by Govt departing from earlier reactive approach.

Ans! → Disaster Management involves a continuous and integral process of planning, organising, co-ordinating and implementing necessary measures to lessen the impacts of disasters. It is the cornerstone of emergency management.



* National Disaster Management Services [NDMS]

↳ Conceived by NDMA in (2015-16)
 ↳ 4SAT network connecting
 MHA, NDMA & NDRF etc.

* Initiatives of NDMA

① Earthquake disaster risk indexing
- 50 important cities & districts in seismic Dr & R zones

② Earthquake Hazard & Atlas maps.

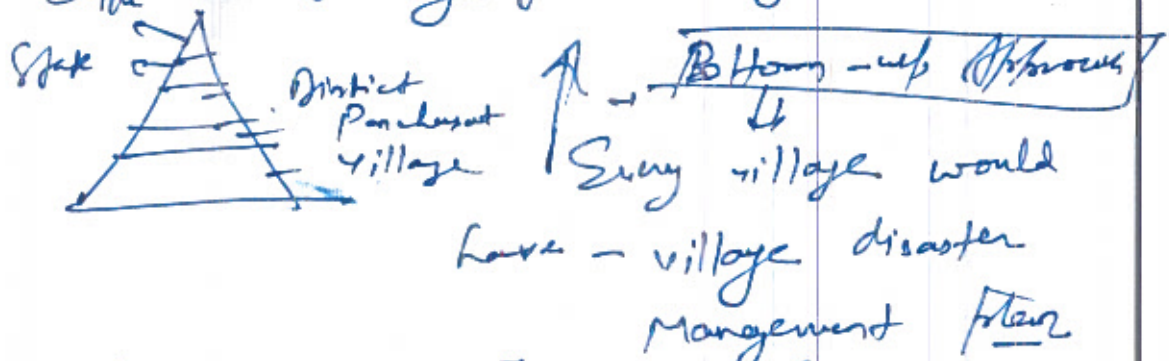
(C) Apda - mitra scheme to train community volunteers.

* National crisis management committee & crisis management group.

* Disaster Management policy
↳ steps on forecasting & warning using advanced technologies

* Mobile Radiation Detection systems to handle radiological hazards

* Community based planning
Conds ↳ starting from village to panchayat



* National Institute of Disaster Management
↳ Capacity development, R & D.

Disaster management is yet to see as integral to development planning. A scientific planned adaptation & mitigation approach with government & community support is required to face any disaster.

Overall Grading (✓).

Poor			Average			Good		
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Q.6) Disaster preparedness is the first step in any disaster mgmt. process. Explain how hazard zonation mapping will help disaster mitigation in case of landslides.

Ans- Disaster preparedness refers to measures taken to prepare for and reduce the effects of disasters. i.e. to predict & prevent disasters, mitigate their impacts & respond to consequences.

It is a continuous and integrated process resulting from a wide range of risk reduction activities. It involves :-

(1) Disaster Research

↳ Mapping of prone-areas

↳ Risk & vulnerability assessment

↳ Strengthening prediction techniques

(2) Study of past history

(3) Impacts.

(2) Preparation of Contingency plans.

Ex -> Safe drinking water

- Infrastructure for shelter

- (3.) Adequate support system
- (4.) Disaster education & awareness
- (5.) Dissemination of disaster related knowledge $\Rightarrow$ Training
- (6.) Involvement of NGOs, Civil society & private players.

Hazard Zone Mapping

It is one of disaster preparedness mechanisms to mitigate the risks associated with landslides & better prepared for eventualities.

India is one of most affected countries by landslide accounting for 28% of events in past 10 years.

* Hazard Zone Mapping (HZM) will divide land into zones & rank them to their degree of potential hazard caused by landslides.

- Helps
- ① Susceptibility of area can be determined & depicted
 - ② Intervention projects can be developed to mitigate

It will provide information to support key decisions for urban development which will reduce the damage potential & other cost impacts of landslides.

It also identifies & delineates unstable hazard prone areas.

Landslides & their associated problems are increasing due to rapid increase in population. Hazard zone mapping serves as an instrument to support integrated disaster management planning.

Overall Grading (✓)

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Q.7) Discuss the factors responsible for occurrence of Tsunamis & their effects on life & economy.
In the light of guidelines of NDMA 2000, describe the mechanisms for preparedness to reduce risks.

Ans! → Tsunamis are massive waves generated by displacement of water and can have disastrous effects on people & coastal towns. 2004 Tsunami took place off the coast in Sumatra & its impact was seen 1000+ km away.

Causes of Tsunami

• Earthquake → thrust fault in zones and along different plates can cause Tsunami.

Ex! - 2004 Tsunami

↳ fault is subduction of Indian plate & overriding Burmese plate.

• Volcanic Eruption! → When volcanoes erupt violently, its shaking causes massive Tsunamis.

Ex! → Explosion of Krakatau Volcano in Indonesia caused Tsunami

↳ Massive under-water landslides $\Rightarrow$ When debris fall abruptly along steep slopes of subseas, seamounts & continental slopes.

Impact of Tsunami

(1) Life $\rightarrow$

- $\rightarrow$ destroyed human life, death.
- $\rightarrow$ devastating impact on insects, animals, plants & resources.
- $\rightarrow$ Can change the landscape
- $\rightarrow$ uproots trees & plants,
- $\rightarrow$ destroys animal habitats
- Ex - Nesting sites for birds.

(2) Economy

- $\rightarrow$ property damage,
- $\rightarrow$ homeless people
- $\rightarrow$ Resourceless $\rightarrow$ loses everything in Tsunami's vicinity
- ↳ Daily life affected
- ↳ Loss tourism
- ↳ Impact to critical infrastructures like transport & power.

Mechanisms suggested by NDMA

↳ Explore options for effective dissemination & warning messages to coastal vulnerable communities.

- ✓ More co-ordination between government agencies.
- ✓ Structural mitigations
 - ↳ Design & Construction
 - ↳ Strategies for protecting Lifeline
 - ↳ priority structures along seaboard
- ✓ Robust - techno-legal regime through efficient land use practices, bio shield.
- ✓ Mangroves management & plantation of trees. $\Rightarrow$ focus on effective deforestation
- Tsunamis are beyond human control & we can only focus on preparation, mitigation and reducing the vulnerability by formulating & implementing National Policy of Disaster management & "Sendai framework".

Overall Grading (✓)

Poor			Average			Good		
1	2	3	4	5	6	7	8	9

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