



## Approach to Answer Writing GS Paper-III

**Q). Discuss about the vulnerability of India to earthquake related hazards. Give examples including the salient features of major disasters caused by earthquakes in different parts of India during the last three decades. (2021, 10M, 150W)**

**Structure of Answer:**

- **Introduction:** Earthquake and related hazards
- **Body:** Vulnerability mapping, Past three decades earthquakes in India-their features.
- **Conclusion:** Conclude with measures to mitigate the impact and develop robust early warning, preparedness.

### Answer

Earthquake is shaking/trembling of earth surface due to sudden release of Energy in the crustal plates. An earthquake related hazard is anything associated with an earthquake that can affect people's day-to-day life. These are:

1. Landslides
2. Tsunamis
3. Liquefaction
4. Surface rupture
5. Tectonic deformation etc.

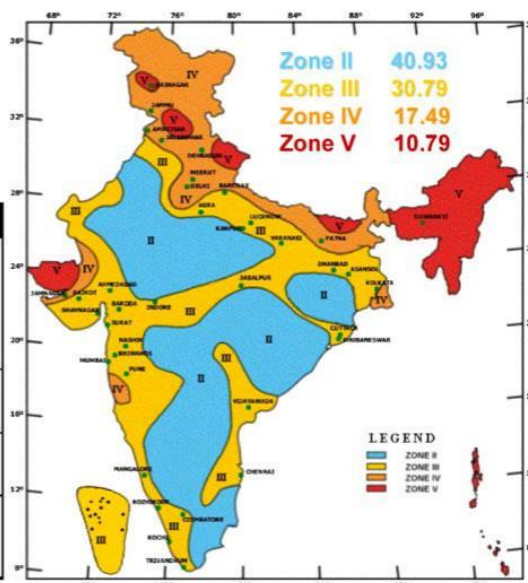
India is vulnerable to earthquakes due to its location on a seismically active zone. Densely populated areas, unscientific constructions, and unplanned urbanization have increased the risks associated with earthquakes in India.

According to BIS, more than 58.6 percent of the landmass is prone to earthquakes of moderate to very high intensity. The following are seismic zones of India.

#### Seismic Zone Map of India: -2002

About **59 percent** of the land area of India is liable to seismic hazard damage

Zone	Intensity
Zone V	<b>Very High Risk Zone</b> Area liable to shaking Intensity IX (and above)
Zone IV	<b>High Risk Zone</b> Intensity VIII
Zone III	<b>Moderate Risk Zone</b> Intensity VII
Zone II	<b>Low Risk Zone</b> VI (and lower)



**Fig. 1 Seismic zonation and intensity map of India**

ADDRESS:



Salient features of major disasters caused by earthquakes in the last 3 decades are:

Earthquake	Features
1. 1993 Latur	<ul style="list-style-type: none"><li>• Relatively shallow depth caused large surface damage</li><li>• Causes remain debatable due to lack of plate boundaries in the region.</li></ul>
2. 1999 Chamoli	<ul style="list-style-type: none"><li>• Caused by thrust fault</li><li>• Resulted in landslides</li><li>• Changes in surface water flow, surface rupture and disconnected valleys.</li></ul>
3. 2001 Bhuj	<ul style="list-style-type: none"><li>• Associated with a reactivated fault, which was previously unknown</li><li>• Great loss of life and property due to unmindful construction</li></ul>
4. 2004 Indian Ocean Tsunami	<ul style="list-style-type: none"><li>• Created by under-water seismic activity</li><li>• Created massive waves which flooded coastal areas and Islands, causing long-term changes.</li></ul>
5. 2005 Kahmir	<ul style="list-style-type: none"><li>• 7.6 magnitude; Caused by severe upthrust of Indian plate against Eurasian plate, it created multiple after-shocks.</li><li>• Infrastructure and communication were disrupted.</li></ul>
6. Nepal-India earthquake in 2015	<ul style="list-style-type: none"><li>• Due to tectonic activity</li><li>• Tremors observed in Delhi as well. India started Operation Maithri.</li></ul>

Earthquakes can not be prevented, but the loss due to them can be mitigated by early warning and robust infrastructure. For this vulnerability mapping of areas is very important.

**ADDRESS:**

19/1A Shakti Nagar, Nagiya Park Near Delhi University, New Delhi - 110007 (India)



## Approach to Answer Writing

### GS Paper-III

**Q. Is inclusive growth possible under market economy ? State the significance of financial inclusion in achieving economic growth in India. (2022, 10M, 150W)**

**Structure of Answer:**

- **Introduction:** Define Inclusive Growth
- **Body:** Market Economy  $\leftrightarrow$  Inclusive Growth, Significance of Inclusive growth
- **Conclusion:** Conclude by highlighting issues of financial inclusion and remedies

Inclusive growth refers to the process and the outcome where all groups of people have participated in growth and have benefited equitably from it. As per OECD inclusive growth is economic growth that is distributed fairly across society and creates opportunities for all.

And market economies are based on the principles of supply and demand, where the market determines the allocation of resources.

**Inclusive growth under market economy:**

1. Increase in GDP due to competition, innovation, and higher efficiency by private sector.
2. Trickle-down effect by creation of Jobs and increase in income levels.
3. Increase in Tax-GDP ratio to fund welfare programmes  $\rightarrow$  Redistribution of wealth.
4. Indicative planning (LPG-1991) to achieve inclusive growth.
5. Availability of basic amenities, infrastructure, Education, Health etc.
6. Overall increase in the living standard of people.

**However, Inclusive Growth and Market Economy may be contradictory as:**

1. Private sector is profit oriented  $\rightarrow$  delivery of Public Goods and Services such as Education, Health etc. will be less focused.
2. Despite availability, many people can't afford due to lack of subsidies.
3. Neglect of Rural and underdeveloped regions by private sector.
4. Regional disparities in development.
5. Concentration of wealth  $\rightarrow$  Economic Inequalities
6. Limited Government role goes against the social welfare objective.

**Financial Inclusion:**

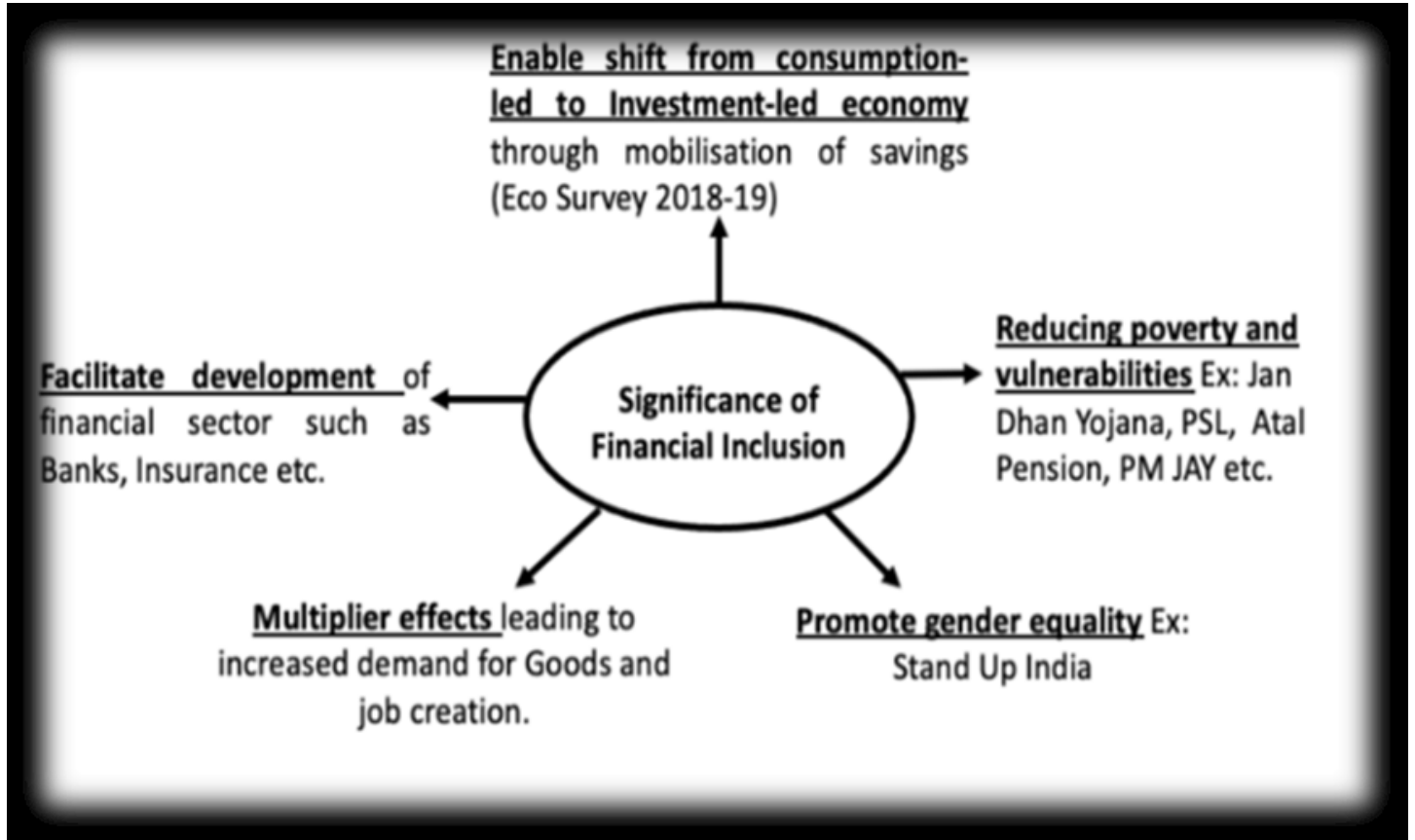
It refers to universal access to financial services such as Banking, Insurance, Pension at a reasonable cost. It is crucial for economic growth and inclusion particularly in this digital era.

**ADDRESS:**

19/1A Shakti Nagar, Nagiya Park Near Delhi University, New Delhi - 110007 (India)



### Significance of Financial Inclusion:



Thus, addressing issues such as lack of Financial Literacy, connectivity, banking facilities etc. improve financial inclusion and promote Economic development and inclusive growth.

#### ADDRESS:

19/1A Shakti Nagar, Nagiya Park Near Delhi University, New Delhi - 110007 (India)