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Sample Preview of the Solved Sample Question Papers

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QUESTION PAPER

June – 2024

(Solved)

DISASTER MANAGEMENT

M.P.A.-18

Time: 2 Hours] ***[Maximum Marks: 50***

Note: *Answer any* ***five*** *questions each. Answer at least* ***two*** *questions from each section. All questions carry* ***equal*** *marks.*

SECTION-I

Q. 1. Write a note on the development perspective to Disaster Management.

Ans. Ref.: See Chapter-3, Page No. 22, 'Development Perspective to Disaster Management'.

Q. 2. Describe the different steps that have been taken for disaster preparedness in India.

Ans. Ref.: See Chapter-4, Page No. 34, 'Disaster Preparedness in India'.

Q. 3. Explain the new directions for resource mobilisation in disaster management.

Ans. Ref.: See Chapter-7, Page No. 62, 'New Directions for Resource Mobilization: Local Sources'.

Q. 4. Discuss the concepts of disaster mitigation and preparedness.

Ans. Ref.: See Chapter-8, Page No. 70, 'Concepts of Disaster Mitigation and Preparedness'.

Q. 5. Write short notes on each of the following:

(a) **Significance and phases of search and rescue.**

Ans. Ref.: See Chapter-10, Page No. 91, 'Significance of Search and Rescue' and 'Phases of SAR'.

(b) **Stages in disaster management.**

Ans. Ref.: See Chapter-2, Page No. 19, Q. No. 1.

SECTION-II

Q. 6. Discuss the requirements in shelter provision.

Ans. Ref.: See Chapter-11, Page No. 98, 'Requirements in Shelter Provision'.

Q. 7. Explain the steps involved in relief distribution.

Ans. Ref.: See Chapter-12, Page No. 106, 'Steps in Relief Distribution'.

Q. 8. Describe the essential features of damage assessment.

Ans. Ref.: See Chapter-14, Page No. 123, 'Essential Features of Damage Assessment'.

Q. 9. 'Incident command system is integral to Disaster Management.' Comment.

Ans. Ref.: See Chapter-13, Page No. 116, 'The Incident Command System'.

Q. 10. Write short notes on each of the following:

(a) **Multi-agency coordination system.**

Ans. Ref.: See Chapter-13, Page No. 119, 'The Multi-agency Coordination System (MACS)'.

(b) **Key lessons for disaster manager.**

Ans. Ref.: See Chapter-18, Page No. 171, 'Key Lessons for Disaster Manager'.

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QUESTION PAPER

December – 2023

(Solved)

DISASTER MANAGEMENT

M.P.A.-18

Time: 2 Hours] ***[Maximum Marks: 50***

Note: *Answer any* ***five*** *questions each. Answer at least* ***two*** *questions from each section. All questions carry* ***equal*** *marks.*

SECTION-I

Q. 1. Write a note on classification of disasters.

Ans. Ref.: See Chapter-1, Page No. 1, 'Classification of Disasters'.

Q. 2. 'An analysis of environmental concerns is pertinent to disaster vulnerability analysis.' Elucidate.

Ans. Ref.: See Chapter-1, Page No. 6, 'Environmental Concerns'.

Q. 3. Examine the features and pertinence of total disaster risk management approach.

Ans. Ref.: See Chapter-2, Page No. 16, 'Risk Reduction Mitigation Preparedness', 'The TDRM Approach' and 'Pertinence of TDRM for Disaster Management Cycle'.

Q. 4. Discuss the nature of capacity building for earthquake vulnerability reduction.

Ans. Ref.: See Chapter-4, Page No. 37, 'Capacity Building for Earthquake Vulnerability Reduction'.

Q. 5. Write short notes on each of the following:

(a) **Relationship between vulnerability and capacity.**

Ans. Ref.: See Chapter-6, Page No. 53, 'Vulnerability and Capacity'.

(b) **Guiding principles of disaster mitigation.**

Ans. Ref.: See Chapter-8, Page No. 74, 'Guiding Principles of Mitigation'.

SECTION-II

Q. 6. Describe the ways of conducting risk assessment in disaster management.

Ans. Ref.: See Chapter-6, Page No. 54, 'Risk Assessment' and Page No. 55, 'Conducting Risk Assessment'.

Q. 7. Examine the principles, strategies, and challenges of Community Based Disaster Management.

Ans. Ref.: See Chapter-9, Page No. 80, 'Concept of Community Based Disaster Management (CBDM)' and 'Principles, Strategies and Challenges'.

Q. 8. Discuss the behavioural requirements of a good rescuer in disaster situations.

Ans. Ref.: See Chapter-10, Page No. 93, 'Behavioural Requirements'.

Q. 9. Explain the guiding principles of rehabilitation and reconstruction.

Ans. Ref.: See Chapter-15, Page No. 134, 'Guiding Principles of Rehabilitation and Reconstruction'.

Q. 10. Write short notes on each of the following:

(a) **Concept of Community Based Disaster Risk Reduction Process.**

Ans. Ref.: See Chapter-17, Page No. 159, 'Community Based Disaster Risk Reduction Process'.

(b) **Concept of emergency operations centre.**

Ans. Ref.: See Chapter-12, Page No. 117, 'Organizational Set-up of EOC'.

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Sample Preview of The Chapter

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DISASTER MANAGEMENT

Meaning and Classification of Disasters

1

INTRODUCTION

Hazard can be a phenomenon, physical event, or human activity which has potential to damage life, property and environment. It can be natural or man-made. It may occur and affect once, continuously or in combined. Hazard Analysis studies and monitors a hazard to know about its origin, capacity to damage and various features.

Environmental resources can be environmental hazards. For example, water under control is water resources, but when water is out of control it becomes flood hazard. Similarly, a benign atmosphere becomes hostile when damaging loo is produced.

A disaster can be natural or induced by human activities. It suddenly disrupts normal life and causes large scale damage to life and property. A distinction can be made between hazard and disaster. For example, floods and cyclones are hazards which can become disasters. Disaster is the catastrophe which actually has happened.

Disaster is a large-scale destructive event caused when endogenous and exogenous factors combine to excite the event which has potential to damage. Disaster becomes a destructive event of large magnitude when it goes on unchecked over a period of time.

Disaster disrupts equilibrium which can be repaired by proactive policies. Traditional perception that disaster is beyond human intervention is a misinterpretation. It thus gives way to a system perspective that includes ecological and social perspectives to disasters. In human activities over long periods of time, underlying hazards can turned to become disasters. Systemic understanding of hazard can be a catalyst as it brings forth underlying tensions.

Disaster Management tries to understand how a hazard becomes a disaster, identify the causes and repair them through various public policies. There are administrative factors like poor building in an earthquake prone area, poor land use planning in flood prone zone and poor laws leads to disasters. Studies in disaster management have been pointing human causatives behind disasters. Thus, the issue of sustainable development emerges.

Disaster management has thus been considered as a policy issue. In the 10th Five Year Plan, Disaster Management has been treated as calamity relief under an exclusive chapter. It was included under non-plan expenditure. After the Yokohama Conference (1994), there was a policy change in the plan allocation also. Now under respective sector plan heads, there is an allocation for disaster mitigation. The reasoning is that disasters could be controlled through better management of the environment.

CHAPTER AT A GLANCE

CLASSIFICATION OF DISASTERS

If we classify disasters on the basis of its origin, it can be natural or man-made. On the basis of severity of its impact, disasters can be categorized as minor or major.

In August 1999, High Powered Committee (HPC) under the chairmanship of J.C. Pant classified disaster under five categories on the basis of generic considerations. They are:

(i) Water and Climate
(ii) Geological
(iii) Biological
(iv) Chemical, industrial and nuclear, and
(v) Accidental. HPC prepared a comprehensive model plan for disaster management.

Water and Climate category includes floods, cloudburst, cyclones, tornadoes and hurricanes (cyclones), hailstorms, droughts, sea erosion, thunder/ lightning, heat wave and cold wave and snow avalanches. Geological disasters include earthquakes, large fires, landslides and mudflows, mine fires and dam failures and dam bursts. Biological disasters include epidemics, pest attacks, cattle epidemics and food poisoning. Chemical, industrial and nuclear disasters include chemical and industrial disasters and nuclear disasters.

Accidental can be urban fires, mine flooding, forest fires, oil spill, serial bomb blasts, festival related disasters, electrical disasters and fires, major building collapse, air, road and rail accidents, village fire and boat capsizing.

Various ministries have been assigned the task of management of disasters. They coordinate activities of various departments and ministries and the state and district administration. For examples, air accidents come under the Ministry of Civil Aviation. Ministry of Home Affairs looks into in cases of civil conflicts. Ministry of Railways looks into cases of railway accidents. Ministry of Environment looks after the case of chemical disasters. Department of Atomic Energy looks after the cases of nuclear accidents. In cases of major breakdown of any of services, concerned ministry looks into the issue.

Heat waves which have caused a large number of deaths was not included among the disasters and it was pointed out by the World Disasters Report, 2004. This may be because high profile disasters like earthquakes get more attention than road accidents even as more people have been dying in road accidents as compared to earthquakes. Heat waves claimed about 22,000 to 35,000 lives across Europe and caused economic losses of US$13 billion in August 2003.

Refugee and illegal migrant problem is another disaster which has been ignored. Migrants remit about US$ 80 billion per year to developing countries, but millions of people left their home due to unavoidable circumstances in the home countries and become refugees. They do not get protection from international laws and institutions. More 175 million people live as refugees or immigrants. They suffer from various problems from deprivations to poverty.

Renewed understanding of disasters suggests that both natural and man-made disasters are actually policy disasters and cannot be said nature's vagaries. Human shortcomings like lack of legal framework to regulate hazardous units have caused disasters like the Bhopal tragedy. Destruction of forests, damage to ecology, excess use of groundwater, new cultivation methods are the causes of floods and droughts. Unchecked exploitation of forests and mountain vegetation in Himalayas is said to be the reason behind landslide in the area. Poor policy restriction over tobacco and liquor has caused large scale deaths globally. Tobacco is causing life-threatening diseases such as oral cancer and heart disease. Tobacco claims 3.5 million lives globally in a year, or 10,000 deaths in a day. Prediction is that by 2020 tobacco will claim more than 10 million lives annually and will become the main cause of death and disability.

In Rajasthan (1996) and Mumbai (2005), it is not floods but epidemic outbreaks after vector proliferation in accumulated waters caused more deaths. This is because of the failure in the system.

In Odisha, it is not the droughts that caused mortality but it is the policy changes, competitive market, poor health because of lower investments in health and education and other shortcomings in the system. In developing countries, policy-makers respond more to external policy influences by way of global pressure to open up markets more than internal needs which is the actual cause behind death and disease.

Development policy needs to be reconsidered keeping in view disasters. Policies implemented in the past have created slums and poverty and led to environmental degradation. The basic needs of the people have not been fulfilled.

There is also imbalanced regional development. Some states like Bihar and Odisha have remained are relatively backward and have higher rate of poverty compared to national average.

Excessive exploitation of resources also has caused more poverty. People are living surviving on depleted resources. This also leads to migration of people from rural to urban areas and which further increases vulnerabilities.

GLOBAL DIMENSIONS OF DISASTERS

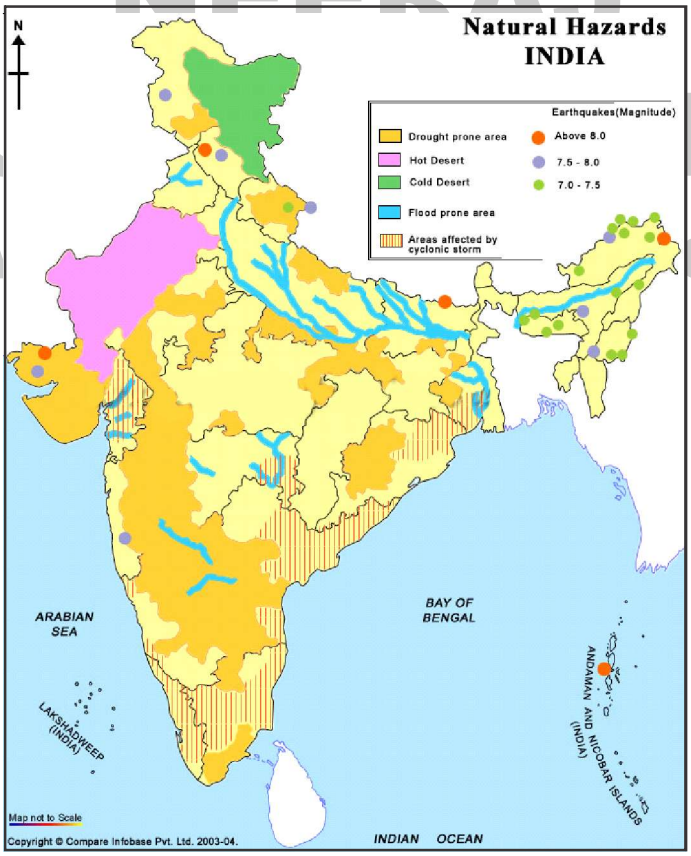
Losses due to disasters have been rising and urbanisation and rising population are said to be the main reasons. In 2001, at least 25,000 people were killed

across the world due to natural disasters of medium to high intensity. It was more than double in 2000 and worldwide economic losses was more than $36 billion, according to the UN report. This report did not include many small-scale disasters. Major events which were included are the earthquakes in Gujarat, El Salvador and Peru; floods in Asia, Africa and elsewhere; droughts in Asia, Afghanistan and Central America, Cyclones in Madagascar and Odisha and floods in Bolivia. During 1996-2000, disasters have caused US$ 235 billion losses and killed 425,000 people.

About 211 million people have been affected annually by natural disasters in the past decade. Asia suffers the much. It is the most disaster-prone part of the world. In the more than three decades, almost half of the major natural disasters have occurred in Asia. About 80 per cent of the affected people and 46 per cent of the economic losses are from the Asian region. About 40 per cent of the deaths happened due to disasters are also from this continent.

Impacts of disasters have worldwide ramifications. Global community need to take concerted action to deal with regional vulnerabilities. The third world countries have been affected more by disasters because their capacity to tackle such events of such large magnitude is lower as compared to that of developed world. Social, physical and economic vulnerability of the population in developing world is considerably higher. In the past two decades, only two per cent of disaster victims are from the developed world and two-thirds are from developing countries.

From 1991 to 2000, Asia lost 5,54,439 people as compared to 1,1159 people in other parts of the world. In Asia, 24 per cent of the deaths happened in India and this is because of its huge size, population and social, physical and economic vulnerability. Most deaths in the country have happened due to floods and high winds. During 1994-2003, both natural and technological disasters in India have claimed 68,671 lives, affected about 68 million people annually and economic loss was US$1.9 billion every year. This is an increasing trend and India needs to strengthen its system and requires urgent support to deal with disasters.



Source: *Compare InfoBase Pvt. Ltd.*

OVERVIEW OF NATURAL DISASTERS IN INDIA

According to the 10th Five Year Plan (2002-07), India is vulnerable to cyclones, floods, droughts, earthquakes and landslides. Coastal regions are vulnerable to cyclones, Sub-Himalayan sector and Western Ghats are vulnerable to landslides, 55 per cent of its area is vulnerable to earthquakes, 68 per cent of its total sown area is vulnerable to droughts and about 4 crore hectare land is vulnerable to floods.

(a) **Floods:** About 8 million hectares areas get affected by floods in India every year. The most flood-hit areas in the country are Brahmaputra and the Gangetic Basin. Other flood-hit areas are the northwest region which gets affected by the west flowing rivers such as Tapti and Narmada, Central and the Deccan regions which get affected by major east flowing rivers such as Cauvery, Mahanadi and Krishna. During the four months of monsoon starting from June, most of the rivers carry heavy discharge because seventy five per cent of rainfall in the country happens during this period. The flood hazard is increased because of synchronization of river floods, deposition of sediment, congestion of drains and sea tides in the coastal states.

(b) **Droughts:** About 68 per cent of the country's total area is affected by an erratic pattern of rainfall. Some of these areas get less than 750 mm rainfall which is considered as low and some areas get 750 -1125 mm rainfall which is medium. Arid, semi-arid and sub-humid areas get 54-57 per cent of below normal rainfall. Arid and semi-arid areas see severe and rare droughts once in every eight-nine years. Most severe intensity drought occurs once in 32 years and almost every third year was a drought year. The semi-arid and arid climatic zones cover about 76 per cent of the total area.

(c) **Cyclones:** The coastal regions of the country get affected by cyclone which generally happened during pre-monsoon in May-June and post-monsoon in October-November. Cyclone causes the maximum destruction within 100 km from its centre. Tidal waves, storm and torrential rains cause coastal inundation, the main reason for loss of lives and properties.

(d) **Earthquakes:** India's Himalayan mountain ranges are vulnerable to earthquake. In about five decades, this region has seen four earthquakes of more than magnitude 8 on the Richter scale. The peninsular part is seismically least active, but an earthquake of magnitude 6.4 on the Richter scale struck Latur in Maharashtra in September 1993 and caused heavy loss of life and damage to property.

(e) **Landslides and Avalanches:** The Western Ghats and the Himalayan region are vulnerable to landslides and avalanches. Heavy rainfalls, river erosions and seismic movements trigger considerable landslide activity in these areas. Jammu & Kashmir, Himachal Pradesh and the Hills of Western Uttar Pradesh experience avalanches.

OVERVIEW OF MAN-MADE DISASTERS

Non-natural disasters such as structural collapses, air disasters, train accident, disasters and sea disasters are all man-made. These can happen suddenly and also have long-term effects.

Man-made disasters such as air accidents, fires, mine flooding, oil spills, rail accidents, bomb blasts, boat capsizing, building collapse and heat and cold wave conditions derail the developmental process in Asian countries which are densely populated and are low-income economies. The poor are the worst affected in such disasters. Poor or lack of urban planning, for instance, has brought forth a range of issues that seek urgent attention at all levels. Local administrative weaknesses and institutional weaknesses increased the risk of hazards.

According to a report under the Transportation Research and Injury Prevention Programme (TRIPP), 80,118 people were killed and 342,200 were injured in road accidents in India in 2002. About 700,000 road accidents happen annually all over the world. These accidents cause much more human suffering and social problems. Road accidents annually cause Rs. 50,000 million financial losses.

There are threats from nuclear, chemical and biological weapons, terrorism and dumping of hazardous waste. Mitigation policies are required to minimize the risks from these threats. Effective legislation can be enacted for this. The impacts of globalisation can also be effectively managed through legislations. Environment impact assessments have already been undertaken in India. This has to be effectively implemented. Environmental Information Centre (EIC) has also been set up to assist in environmental impact assessment. For example, for oil spills, satellite imagery can be used to point out vulnerable areas and mitigate measures can taken.

Communal riots are also man-made disasters. Post-Babri Masjid demolition violence, Gujarat riots and the sub-ethnic North-East conflicts are some of the examples. Some measures like spreading awareness among communities, strengthening positive social capital proactively and providing active state support to social would be some of the desirable activities.

In disaster management efforts, health plays an important role. According to World Disaster Report 2004, HIV/AIDS, common disease, food insecurity, dirty water and sanitation, food shortage and uncontrolled urbanization have become a disaster in