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GENERAL STUDIES (TEST CODE : 1817)

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Medium Eng./Hindi	English	Registration Number	1062113
Center	Online	Date	21/8/22

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	12.5	
2	12.5	
3	12.5	
4	12.5	
5	12.5	
6	12.5	
7	12.5	
8	12.5	
9	12.5	
10	12.5	
11	12.5	
12	12.5	
13	12.5	
14	12.5	
15	12.5	
16	12.5	
17	12.5	
18	12.5	
19	12.5	
20	12.5	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are **TWENTY** questions printed in **ENGLISH & HINDI** इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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Answer all the questions in NOT MORE THAN 200 WORDS each. Content of the answers is more important than its length. All questions carry equal marks.

12.5X20=250

1. Enumerate the achievements of the National Green Tribunal (NGT). Also give an account of the issues associated with its functioning.

राष्ट्रीय हरित अधिकरण (NGT) की उपलब्धियों को सूचीबद्ध कीजिए। साथ ही, इसके कामकाज से जुड़े मुद्दों का भी विवरण दीजिए।

NGT is the statutory and quasi-judicial body formed under the NGT Act (2010). It deals with issues pertaining to Pollution, deforestation etc

Achievements

① Speedy disposal of cases → Remove long litigation.

② Bring domain expertise in environmental jurisprudence

↳ By inclusion of experts in NGT Team

③ Additional protection against environmental degradation
↳ by having a quasi judicial body

⑤ Helps in India's commitments at COP26 (Paris Agreement)

However, issues are:

① Incomplete Jurisdiction.

Exclusion of Wildlife Protection Act and Forest Right Act from purview of NGT

② Non-fulfillment of orders.

By government and the bodies.
Thus, lack of enforcement.

③ Anti development → ~~the~~ with
respect to economic growth.

④ Vacancies → In NAT panel of
judges & experts.

Thus, urgent steps needed to be
taken to give adequate teeth to
NAT to fulfill its mandate

2. Identify the major reasons behind forest fires and challenges faced in managing them in India. Also, highlight various steps taken for forest fire management in India.

भारत में वनाग्नि के लिए उत्तरदायी प्रमुख कारणों और उनका प्रबंधन करने में सामने आने वाली चुनौतियों की पहचान कीजिए। साथ ही, भारत में वनाग्नि के प्रबंधन के लिए किए गए विभिन्न उपायों पर भी प्रकाश डालिए।

Forest fires refer to the development of fire in forested lands due to natural and anthropogenic causes.

Reasons

(A) Natural causes

- ↳ High temperature
- ↳ Low humidity.
- ↳ Friction among trees, dry leaves
- ↳ Lightning.

(B) Anthropogenic causes

- ↳ Rural activities → campfires etc.
- ↳ Shifting cultivation by them.

- ↳ Negligence by humans
- ↳ Climate change → Increase
instances of heat waves, heat dome
etc

Challenges faced

- ① Huge forest area → Make it diffi-
cult to monitor prone areas.
- ② Lack of proper preparation
↳ Ad-hoc responses are reactive
rather than pro-active.
- ③ Lack of involvement of local
communities → Reduce expertise
↳ No effort on Tham
cultivation.
- ④ Lack of scientific approach to
control forest fires. Eg. Data

Collection, surveys etc.

Steps Taken

- ① Real time monitoring → Use of geospatial satellites of ISRO
- ② Community Participation → Entry of tribals, tourist etc.
- ③ Deployment of Water Pipelines across forest → To immediately extinguish fire
- ④ National Fire Management Plan
To mitigate forest fires

However, as human activity and climate change increases, there was urgent need to bring further initiatives & policies

3. Explaining the meaning of Gross Environment Product (GEP), highlight its significance.

सकल पर्यावरण उत्पाद (GEP) का अर्थ स्पष्ट करते हुए, इसके महत्व पर प्रकाश डालिए।

GEP refers to the assessments of environmental gains and losses of a particular area during a particular time period (1 year) in monetary terms.

It is used to calculate the environmental targets and properly link environment with overall economic growth. (GDP)

Significance

- ① Overcomes the monoracial study of growth → New indicator to supplement GDP/GNP

② Appropriate Data Collection

↳ Scientific methods to study environment

↳ Used for future policy formulation

③ Clear concept and enhances
concept of Human Development

↳ HDI is a good measure of
standards of living.

④ Helps to introduce course
correction → With respect to
environmental policy.

↳ Helps to measure success of
schemes implemented.

⑤ Help India's fulfillment of
promises at COP26 (Paris Summit)

Uttarakhand Government is the
first government to implement
GEP.

Rest of the country, Union & States,
should also adopt this indicator.

4. Highlight the various factors that contribute to biodiversity loss. Also mention various approaches of biodiversity conservation.
उन विभिन्न कारकों पर प्रकाश डालिए जो जैव विविधता ह्रास में योगदान करते हैं। साथ ही, जैव विविधता संरक्षण के विभिन्न दृष्टिकोणों का भी उल्लेख कीजिए।

Biodiversity refers to the overall difference between genes, species and communities of a given area.

⚡ Biodiversity loss can be detrimental to overall ecosystem.

Factors

Ⓐ Natural Causes

- ↳ Evolution → Survival of fittest
Eg. Homo sapiens
- ↳ Extinction events via natural events like wildfire, volcanic eruption etc. Eg. Dinosaurs

Ⓑ ~~And~~ → Change in habitat due to natural causes. Eg: Ice Age and Post Ice Age time

⑬ Anthropogenic causes

↳ Habitat loss → Due to deforestation, pollution etc.

Eg. Galapagos

↳ Exploitation → Poaching for meat, skin, organs etc.

Eg. Dodo bird

↳ Invasive species → When species change the competition, reduce overall food.

↳ Climate change → Increase in sea levels, change in environment can contribute to significant biodiversity loss

Approaches of biodiversity conservation!

① In-situ conservation

- ↳ Wildlife parks
 - ↳ Biosphere reserves
 - ↳ Tiger Reserves
- } Preserving biodiversity in its own habitat

② Ex-situ conservation

- ↳ Gene Protection
 - ↳ Seed Bank
 - ↳ Zoological Parks (Ex. Zoo)
- } Preserving biodiversity away from its original habitat

Biodiversity loss is a part of larger climate change process.

Hence, urgent steps are needed to mitigate it.

5. Describe the different types of biological disasters and highlight the challenges in their management in India. Suggest measures to address them as well.

विभिन्न प्रकार की जैविक आपदाओं का वर्णन कीजिए और भारत में उनके प्रबंधन में सामने आने वाली चुनौतियों पर प्रकाश डालिए। उन्हें दूर करने के उपायों का भी सुझाव दीजिए।

Biological disasters refer to disasters involving disease and death and disability for a pronounced period of time over a large geographical area.

It is of 2 types!

- ① Epidemic → Affecting large number of humans in a particular (eg. cholera, malaria etc.) country
- ② Pandemic → Affecting large number of humans across a number of countries. Eg. Covid, Spanish flu.

Challenges for India

① Large amount of socio-economically deprived population.

↳ Inaccessibility of healthcare and safe living conditions and awareness about health

② Chronic low funding

↳ Healthcare as a percent of GDP is 1.2%.

③ Lack of infrastructure and

adequate health care personnel

eg. There is not a single Biosafety level IV lab in India

④ Absence of a disease monitoring

body → Managed by Health Ministry

↳ Leads to long response time

⑤ Health as a state subject

Lack of convergence between centre and states for biological disaster

Measures required

① Bring out a comprehensive and
dedicated policy on biological
disasters.

② Increase investment → In health,
R&D, capacity building, infrastr-
structure, PHCs etc.

③ Training of officials → In treat-
ment of biological disasters. and
NDRF force.

With WHO's prediction of many more
bird-style pandemics, India should
prepare for any such contingency.

6. Discuss the significance of Disaster Risk Reduction (DRR) in context of India.
भारत के संदर्भ में आपदा जोखिम घुनीकरण (DRR) के महत्व की विवेचना कीजिए।

Disaster Risk Reduction is part
(DRR)
of a broader Disaster Management
Plan. It involves to analyse and
reduce vulnerabilities to disaster.

Need of DRR in India

① India is one of the most vulnerable
countries

- ↳ socio-economically deprived
 dense population
- ↳ Location in tropical areas - Higher
 chances of biological disasters
- ↳ One of the most cyclone prone
 regions
- ↳ Higher altitudes face risk of
 clou burst, flash floods etc

↳ Huge areas are earthquake
prone. Eg. North Indian belt,
Western belt

② Economic loss → Due to unprepared-
ness with respect to disasters.
Eg. Loss of property, infrastructure
and economic growth.

Significance

- ① Improve disaster preparedness
If fail to plan, you plan to fail
- ② Mitigate the effects of disaster
Via proper maps, surveys, shelters,
mock drill etc
- ③ Adapt to certain kinds of
disasters via targeted investments

Ex: Earthquake resistant buildings

④ Prevent ~~loss~~ socio-economic
loss due to disasters.

so that normal life and activities
can start as soon as possible.

⑤ Enhance Public Safety

Reduce panic, confusion and hysteria.
in disaster period.

Thus, DRR is need of the hour
for the Indian state in line with
Sendai Framework (2015-30) and

National Disaster Policy on
Disaster Management (2009)

7. Give an account of the various issues related to e-waste management in India. What measures are required by different stakeholders to address these issues?

भारत में ई-अपशिष्ट प्रबंधन से संबंधित विभिन्न मुद्दों का विवरण दीजिए। इन मुद्दों के समाधान के लिए विभिन्न हितधारकों द्वारा क्या उपाय करने की आवश्यकता है?

e-waste or electronic waste refers to the discarded appliances, tools, sub-parts etc. of old electronic appliances.

India is 3rd ~~most~~ largest producer of e-waste (after USA & China)

Issues

- ① Lack of funds → To efficiently manage e-waste and dispose it safely
- ② Lack of infrastructure → To handle safe processing of e-waste

⑤ Industry

→ Waste Management Industry

→ Recycling, Reusing of e-waste whenever possible

→ Safe processing → Ex. Suits & protective gear for workers.

→ Manufacturers → Use of Safe & recyclable materials to produce appliances

⑥ Government

→ Proper policy framework

→ Implementation EPR regulations, polluter pays principle

→ Give appropriate Investment, incentives, subsidy and environment to electronics & e-waste industry

The proper handling of e-waste is part of larger aim of Circular Economy, which can lead to Sustainable Development

8. What are the major reasons behind the occurrence of industrial disasters in India? Suggest measures to prevent such disasters.
भारत में औद्योगिक आपदाओं के घटित होने के लिए उत्तरदायी प्रमुख कारण क्या हैं? ऐसी आपदाओं को रोकने के उपायों का सुझाव दीजिए।

Industrial Disasters refer to large scale accidents which happen due to negligence of industry, government or both. Ex. Bhopal Gas Tragedy

Major reasons

① Weak regulation

↳ Lack of safe & sturdy infrastructure → Due to excessive focus on profit margins

↳ Weak implementation of laws

Due to corruption, inefficiency, indifference by government officials
Ex. Flouting of pollution norms on Rivers, Ganga

② Lack of proper monitoring mechanism

↳ On part of state to control safety regulations in industries
↳ In system of punishment & penalties.

③ Informalisation of industries

↳ keeps them outside the ambit of regulations & use of informal, underpaid workers

④ Location of industries

↳ nearer to green zones, urban population. Eg: Union Carbide factory near at centre of Bhopal.

⑤ Weakening of regulation to promote ease of doing business.

As India industrializes, urgent measures are needed to mitigate industrial disasters.

① Streamlining of legislation
↳ To reduce multiplicity of laws,
agencies, departments for efficiency
and. ~~proper~~ proper funding

② Measure risk → Use of inspection,
field visits, surveys so that
Risk Management can be done.

③ Disaster Risk Reduction.

↳ so that loss of life and property
is minimum. eg. safety regulations,
mock drills etc.

The umbrella body here is NDMA.
Thus, NDMA should be given
more teeth to deal with disasters.

9. Identify the different sources of greenhouse gas (GHG) emissions from agricultural activities. Also suggest measures to reduce these emissions.
कृषि गतिविधियों से ग्रीनहाउस गैस (GHG) उत्सर्जन के विभिन्न स्रोतों की पहचान कीजिए। साथ ही, इन उत्सर्जनों को कम करने के उपायों का भी सुझाव दीजिए।

Agriculture is one of the biggest source of Green House Gas (GHG) emissions. This include Carbon Dioxide, Carbon Monoxide among others.

Different sources

① Sowing of crop

↳ Rice and wheat cropping
Increases methane production

② Growing of crop

↳ Use of fertilizers → Increase in
oxides of nitrogen.

↳ Use of electronic appliances
like pumps and motors which use electricity

city and diesel to run.

③ Crop Harvesting → Use of mechanised agriculture increases emissions.

④ Post crop harvesting → Burning of crop residue (Eg. stubble burning) gives rise to GHG emissions.
→ Production of organic manure leads to release of methane

Measures to reduce

① Crop Sowing Measures

↳ Zero Tillage farming → To reduce soil tilling

→ Efficient use of fertilizers

Eg. Nano Urea.

↳ Prevent over irrigation → To reduce waste of water

⑤. Policy Measures

↳ Reduce heavy subsidies on
fertilizers, electricity, water etc.

↳ Go for Crop Diversification

Reduce dependence on rice.

Eg Pulse can fix nitrogen
naturally.

Sustainable Agriculture, thus, is
beneficial for farmers, people,
state and environment.

Thus, urgent steps are needed
to implement the required
policies.

10. Highlighting the reasons behind the occurrence of landslides, discuss various methods to mitigate their impact.

भूस्खलन की घटनाओं के लिए उत्तरदायी कारणों पर प्रकाश डालते हुए, इनके प्रभाव को कम करने हेतु विभिन्न तरीकों पर चर्चा कीजिए।

Landslides refer to a mass movement where a huge chunk of earth, mud, gravel, stones slide over suddenly due to gravity.

Reasons

① Natural causes

- ↳ Excessive rains and flooding.
- ↳ Chandbunets. E.g. Kedar Nath
- ↳ Slope → E.g. Himalayas Floods.

② Anthropogenic causes

- ↳ Deforestation → Leads to loss of of vegetation to hold the soil tightly.
- ↳ Excessive livestock → leads to loss of vegetation.

- ↳ Overpopulation → Increasing pressure of on land by Urbanisation
- ↳ Big ticket Infrastructure Projects lead to loss of Integrity in soil structure → Emasculate landslides
- ↳ Climate change → Leads to erratic rainfall and cloudburst behaviour

Various methods to mitigate

- ① Early Warning Systems to warn about impending disaster.
- ② Development of risk map
 - ↳ By use of ISRO's geospatial satellite Dhanu
 - ↳ Prepare DRR methods as per the vulnerability

③ Restrict ~~on~~ heavy construction
↳ Follow sustainable development plans. Eg. Nature house, trekking rather than heavy urbanisation.

④ Afforestation → The increase direct vegetation to hold the soil tightly.

⑤ Stringent regulatory norms
like judicious conduct of.
Risk studies, Environmental
Impact Assessment, Social Impact
Assessment.

Thus, landslide preparation should be according to Sendai Framework (2015-30) for mitigation of disaster.

11. What are Bioindicators? Using examples, illustrate their importance in the assessment of quality of environment.

जैव संकेतक (बायो-इंडिकेटर) क्या हैं? उदाहरणों का उपयोग करते हुए, पर्यावरण की गुणवत्ता के आकलन में उनका महत्व समझाइए।

Bioindicators refer to living organisms whose life and population gives a qualitative understanding of environment.

Importance

① Tell about quality of habitat

Eg. Corals tell that sea water is clean and non-polluted

② Can tell about quality of air.

Eg. Lichens in air. algae in water.

③ Can tell the potential damage
done.

Eg. Disappearance of phytoplankton
shows change in characteristics
of water

Thus, bioindicators are natural
measure of quality of environment

12. What do you understand by community based disaster management (CBDM)? Highlight its significance for disaster preparedness in India.
 समुदाय आधारित आपदा प्रबंधन (CBDM) से आप क्या समझते हैं? भारत में आपदा से निपटने की तैयारी के लिए इसके महत्व पर प्रकाश डालिए।

CBDM refers to the involvement communities and people to mitigate disaster. It is an important part for Disaster Risk Reduction measures.

Significance

- ① Resource Management
 Helps to mitigate disaster at local levels
- ② Decrease in cost of disaster preparedness
- ③ Real time response to disaster
 can be achieved → Less loss of life & property.

- ④ Build on approach
more democratic approach.
 - ⑤ Go beyond One size fits all
approach. → Customization of
plans
 - ⑥ Build local infrastructure and
capacities
 - ⑦ Constructive role played by
local governments
- CBDM efforts are instrumental
for an effective disaster
response. Thus, governments
should incentivize CBDM
programmes all over.

13. Enumerate the various abiotic factors that lead to variations in the conditions of different habitats. Also, elaborate upon the ways in which organisms respond to such changes.

उन विभिन्न अजैविक कारकों को सूचीबद्ध कीजिए, जो विभिन्न पर्यावरणों की दशाओं में भिन्नता लाते हैं। साथ ही, जिन तरीकों से मजीव ऐसे परिवर्तनों के प्रति अनुक्रिया करते हैं, उनका सविस्तार वर्णन कीजिए।

Habitat refers to the living space of organisms. Abiotic factors represent the non-living things present in a habitat.

Various factors

- ① Temperature → Varies significantly with latitude & altitude
- ② Water → Can either be in physical form or in humid form.
- ③ Topography → The general geography of a place. E.g. Rock, Stone, soil.
- ④ Light → The ultimate source of energy

(4) Human Sanctification → Shows how habitats are affected in present times.

Response of organisms

① Evolution → Survival of the fittest over many generations.
Eg. Long Neck of Giraffe.

② Migration → Happens if life conditions become very difficult.
Eg. Birds migrating to India during winter.

③ Adaptation → Develop certain habits, characteristics that help in survival. Eg. Thick fat deposits in polar bear.

Thus, an interaction between biotic
and abiotic factors produce a
resilient ecosystem.

14. Explain the Disaster Management Cycle by stressing upon the significance of each of its critical stages with examples.
आपदा प्रबंधन चक्र के प्रत्येक महत्वपूर्ण चरण के महत्व पर बल देते हुए इसकी संक्षेपण व्याख्या कीजिए।

Disaster Management Cycle refers to a complete process of how a disaster plays out and the response towards it.

It is of 3 phases:

① Pre-disaster phase

Prevention, mitigation and preparedness happens
Disaster risk reduction strategies are employed:

- | | |
|---|------------------------------|
| ① Awareness about disaster | ④ Simulation, mock drills |
| ② Preparation of plans | ⑤ Infrastructure development |
| ③ Provision of food, water, shelter etc | |

② Disaster Occurrence phase

↳ Aim is to minimise pain and loss of life and property

↳ Immediate evacuation, search and rescue, relief work, essential supplies. E.g. cyclone shelter rescue operations.

③ Post Disaster phase

↳ Aftermath of disaster.

↳ Aim is to recover, rescue, rehabilitation, Resettlement and re-development

↳ It aims to start normal life as soon as possible and adopt the lessons during disaster in future plans - E.g. Earthquake resistant buildings etc.

The analysis of dementers in cycles
provides a holistic understanding
and adaptation to dementers.

15. Harmful algal bloom (HAB) not only has adverse economic and environmental effects but is also detrimental to human health. Discuss.
हानिकारक शैवाल प्रस्फुटन (HAB) का न केवल प्रतिकूल आर्थिक और पर्यावरणीय प्रभाव पड़ता है, अपितु यह मानव स्वास्थ्य के लिए भी हानिकारक है। चर्चा कीजिए।

HAB refers to the exponential rise of algae in a water body.

It can happen due to natural as well as exponential causes.

Environmental effects

- ① Reduce oxygen levels in water.
 ↳ Results into hypoxia in water.
 ↳ Kills all marine life below ocean. water
 ↳ Covers the surface to cut off outside oxygen.
- ② Leads to change in pH, salinity, etc

Impact on human health

① Direct consumption can lead to harmful health effects

Eg. Food poisoning, diarrhoea, sepsis etc.

② Bioaccumulation and Bio-magnification → of harmful substances in human body.

③ Can become a breeding ground for mosquitoes and other pests.

Thus, HABs should be treated as soon as possible via various treatments to reduce harmful impacts.

16. Explaining the reasons behind recurring droughts in India, highlight the challenges faced in drought management.

भारत में बार-बार पड़ने वाले सूखे के लिए उत्तरदायी कारणों की व्याख्या करते हुए, सूखा प्रबंधन में सामने आने वाली चुनौतियों पर प्रकाश डालिए।

Drought refers to pronounced deprivation of water, rain for a prolonged period of time.

In India, the phenomenon has become recurrent because!

① Seasonable rainfall

↳ Happens in the monsoon period via South West Monsoon winds.

↳ Inter regional disparity of rainfall → Unequal distribution of water

② Misuse of water

↳ Overexploitation and overuse of water

↳ Overirrigation in agriculture

→ Depletion of water table
→ Poor Watershed management

③ Climate change → Leads to erratic rainfall, land desertification and global warming.

Challenges faced in drought management

① Lack of funds → To develop holistic planning

② Lack of capacity and infrastructure → To implement ambitious watershed management plans.

③ Lack of involvement of community → Top down model

reduces efficacy of drought management

⑤ Reactive approach of relief

Not proactive approach of mitigation

⑥ Water is a state subject →
Centre state clashes over schemes

⑥ Lack of hydrological data

To prepare and implement policies.

Water crisis is slowly becoming a pan India threat. Thus a pan India

multistakeholder approach is
needed to adapt to it

17. Enumerating the major causes of land degradation, highlight the remedial measures, which can be taken in this context.

भूमि निम्नीकरण के प्रमुख कारणों को सूचीबद्ध करते हुए, इस संदर्भ में किए जा सकने वाले, उपचारात्मक उपायों पर प्रकाश डालिए।

Land degradation refers to a decrease in its physical and chemical qualities.

Type of land degradation →
Aridification, desertification,
salinization, soil erosion etc.

Causes

① Natural Causes

- ↳ Heavy rainfall.
- ↳ High temperatures
- ↳ Natural disasters. E.g. Floods
- ↳ Decrease in vegetation
- E.g. Drought.

(5) Anthropogenic causes

↳ Poor Agricultural Practice

Over irrigation, excess use of fertilizers, tilling of soil etc.

↳ Deforestation → Loss of vegetation leads to soil erosion.

↳ Overgrazing → Soil erosion

↳ Urbanisation → Increased pressure on land, soil pollution

↳ Big ticket Infrastructure development

Eg. Dams, Roads etc. lead to soil erosion, inundation, deforestation etc.

Remedial Measures

① Sustainable Agriculture and
livestock management → Ex. Zero
Tilling Method, Organic fertilizers
etc.

② Sustainable Urbanisation
Compensatory Afforestation, develop-
ment of green spaces, urban forestry
etc.

③ Watershed Management → Sustainable
use of land and water.

④ Treatment of land → Ex. Addition
of alkalis in soil to counter acidifi-
cation.

Prevention of land degradation is
part of larger aim of sustainable
development, without which
humanity is in danger.

18. What do you understand by Strategic Environmental Assessment (SEA)? How does it differ from Environmental Impact Assessment (EIA)?
रणनीतिक पर्यावरणीय आकलन (SEA) से आप क्या समझते हैं? यह पर्यावरणीय प्रभाव आकलन (EIA) से कैसे भिन्न है?

SEA refers to the broader policy of integrating environmental goals to policy.

EIA refers to conducting assessment of environment with respect to a proposed project

SEA	EIA
① Broad concept	① Narrow concept
② Proactive Approach	② Reactive approach.
③ Helps in <u>sustainable development</u>	③ Helps in <u>environment conservation</u>

(4) Is not
enforceable
by law

(5) Enforceable by
law
Environment
Protection Act, 1986

Keeping in line with Panchajit
Goal at COP 26, India should
accommodate SEA Planning
in Policy for larger cause of
Sustainable Development.

19. Despite its comprehensive coverage, the National Disaster Management Plan has several drawbacks, which act as impediments in achieving its objectives. Discuss.

अपने व्यापक कवरेज के बावजूद, राष्ट्रीय आपदा प्रबंधन योजना में अनेक कमियाँ हैं, जो इसके उद्देश्यों को प्राप्त करने में बाधाओं के रूप में कार्य करती हैं। चर्चा कीजिए।

NDMP was released in 2016 by
keeping line with Sendai
Framework (2015-30).

Revisions

- ① Covers both natural and man made disasters
- ② Covers all phases of disaster management cycle - Pre-disaster, awareness during disaster, Post disaster.
- ③ Adequate focus on mitigation as well as adaptation.

- (4) Focus on training, investment and capacity building.
- (5) Focus on Public Awareness and Public Education.
- (6) Provision of Timelines - 5, 10, 15 years for disaster planning.
- (7) Adoption of International best practices like Sendai Framework.

Drawbacks

- (1) Implementation on ground is very slow
- (2) Lack of funds to adopt the various plans.

③ Focuses on one step file for
all - Does not take into account
the inter regional and inter - regional
disparities.

However, NDMP is a positive
step. But it needs more concrete
steps to develop a holistic model
of Disaster Management and
Planning.

20. Enumerating the reasons behind depleting groundwater levels in India, highlight the steps taken by the government to address this issue.
भारत में भीम जल के गिरते स्तर के लिए उत्तरदायी कारणों को सूचीबद्ध करते हुए, इस मुद्दे का समाधान करने के लिए सरकार द्वारा उठाए गए कदमों पर प्रकाश डालिए।

As per NITI Aayog's Composite Water Management Index, a huge area of India is under ~~water~~ Water Stress

The major cause is because of depletion of groundwater..

Reasons

① Overexploitation of water

- ↳ Overuse of water by domestic population
- ↳ Overirrigation by farmers
- ↳ No concrete steps to recharge the aquifers.

② Population burden → Demand.

of ~~new~~ more resources
which include water also

③ Faulty policies → MSP on rice
and wheat, subsidized electricity,
free water etc.

④ Lack of public awareness → about
harmful effects of groundwater
depletion. Ex: Almost Zero day
at Chennai

⑤ Climate change → Leads to
irregular monsoon and frequent
droughts.

Steps taken by government

① Central Ground Water Authority
(CGWA) → Established under EPA, 1986

② Establishment of Ministry of Jal Shakti

↳ Umbrella Ministry for water conservation and management

③ Watershed Management

Including rainwater harvesting to reduce dependence on groundwater.

④ Updation of Agricultural Practices - e.g. PM Kisan Sinchayi Yojana.

Groundwater takes thousands of years to be accumulated and is a big source of freshwater. Depletion of groundwater is a threat to water security.