

QUESTION BANK FOR THE UPSC MAIN EXAMINATION

Question Bank for High Priority Topics

Chapters 9 & 10. Energy Resources: Global and Indian

1. Why have the global oil prices dropped dramatically since 2014?
2. Describe the Chernobyl accident and its consequences.
3. Is biomass always a renewable energy source?
4. Explain (with examples) the statement: 'It takes energy to produce energy.'
5. Explain the Hubbert Curve and the concept of Peak Oil.
6. List the advantages and disadvantages of promoting hydropower.
7. Explain why we cannot quickly change over from fossil fuels to renewable energy resources.
8. Describe three ways in which we can harness energy from the ocean. Describe the actions taken by the Union government in recent years to promote the use of renewable energy in the country.
9. What is the main reason for the high consumption of coal in India?
10. Write a short note on the fuelwood problems in developing countries.
11. Describe the UN Initiative Sustainable Energy for All.
12. What are the advantages of thorium over uranium for nuclear power generation?
13. What is the International Solar Alliance?
14. How does the system of Renewable Energy Certificate work?
15. What is the status of hydropower in India? What are the challenges?
16. Describe the three stages of India's nuclear energy programme.
17. Describe the role of the Bureau of Energy Efficiency.

Chapter 14. Disasters and Disaster Management

1. Using examples, explain the difference between meteorological and climatological disasters.
2. Explain the main features of the Sendai Framework for Disaster Risk Reduction.

3. There is a paradigm shift in India's disaster management policy. Explain.
4. What are the methods of cleaning up oil spills?
5. What are the deficiencies in India's Disaster Management system, what are the challenges, and what should be done?
6. How serious is the earthquake proneness of the Himalayan Region and what should be our response?

Chapter 7. Water Resources: Rivers, Lakes, and Wetlands

1. What can we learn from the work of Rajendra Singh and Tarun Bharat Singh?
2. Explain the differences between renewable and non-renewable natural resources, giving examples.
3. Which sector takes most of the water in the world? What is the significance of this fact for the future?
4. Explain this paradox: Overall, there is plenty of water in the world and yet millions of people face water scarcity.
5. Explain physical, economic, and institutional water scarcity.
6. Explain the different types of conflicts over water, giving examples.
7. Explain the purpose of the UN Convention on the Protection and Use of Transboundary Watercourses and International Lakes. How is it different from other UN Conventions?
8. What are the basic issues in the Plachimada Case?
9. Describe the need and objectives of the National Project on Aquifer Management.
10. What are the advantages and limitations of desalination as a way of providing drinking water to large populations?
11. Describe the global pattern of water use across sectors. What are the main differences between the industrialized countries and the developing countries with regard to water use?
12. What is the link between water scarcity and food security?
13. What are the main goals of the National Water Mission?
14. List any five highlights of the National Water Policy of 2012.
15. What are the key issues underlying the Ravi-Beas Waters Dispute between Punjab and Haryana?
16. What are the objections of environmentalists to the draft Wetlands (Conservation and Management) Rules of 2016? What should be done to conserve wetlands?

Chapter 8. Land Resources: Agriculture and Mining

1. Explain the reasons behind the recurring farmer suicides in India.
2. Why does the UN Convention to Combat Desertification call desertification as 'The Invisible Frontline'? What are the global measures being taken to prevent desertification?
3. In what ways was the Green Revolution a clear shift from traditional agriculture?
4. What are the main provisions of the International Treaty on Plant Genetic Resources for Food and Agriculture?
5. Comment on the Soil Health Card Scheme.

6. What are the arguments in favour of and against the introduction of GM crops? How can we take the right decision in this matter?
7. What is the role of earthworms in the soil?
8. What are the environmental and social impacts of mining?
9. Is deep seabed mining a desirable activity? What are its potential impacts?
10. Globally, the land under organic farming is just 1% of agricultural land. What are the reasons?

Chapter 13. Population Growth and Urbanization

1. What are the unique characteristics of Dharavi that make it difficult to 'redevelop' it?
2. What are five main points of the World Cities Report 2016?
3. What is common to the three programmes: AMRUT, HRIDAY, and Smart Cities?
4. What is India's Demographic Dividend and why is it an advantage?

Chapter 15. Global Warming, Climate Change, Ozone Depletion, and Acid Rain

1. What were the key provisions of the 2015 Paris Agreement on Climate Change?
2. What are the implications of the 2015 Paris Agreement on Climate Change for India and other developing countries?
3. Compare the provisions of the original UN Framework Convention on Climate Change of 1994 and the Paris Agreement on Climate Change of 2015. What are the fundamental differences between the two documents?
4. Climate change that we experience today is the result mainly of the huge greenhouse gas emissions released by the developed countries over many decades. What should be their 'historical responsibility' in addressing the problem and what is the stand they are taking now?
5. What is the global carbon budget and what is its significance? How should this carbon budget be used? Should countries share it based on population or some such criterion? Do the developed countries have a 'historical responsibility' to let the developing countries use up more of the budget?
6. What is the impact of climate change on small islands such as the ones in the Sundarbans?
7. Describe briefly India's National Action Plan on Climate Change.
8. What were the five major points in the Pope's encyclical on climate change? Why is it important for the faith groups in the world to take a clear stand on climate change and other such environmental issues?

Chapter 17. Sustainable Development

1. If constant economic growth is neither possible nor desirable, what kind of 'growth' should a society aim for? Are Gandhiji's ideas relevant to this question?
2. Describe the special problems of displacement caused by dams.
3. What were the major issues that came up at the UN Conference on the Human Environment, held in Stockholm, Sweden, in 1972? Are they still relevant today?
4. What is meant by Green Economy?

- Why is GDP not a proper measure of the real progress of a country? What are the alternative indices for measuring progress?

Question Bank for Medium Priority Topics

Chapter 12. Pollution of Air, Water, and Ocean

- What are the lessons we can learn from the Taj Trapezium pollution case?
- Describe the main features of the National Air Quality Index.
- How does groundwater get polluted?
- Describe the main activities under Swachch Bharat Abhiyan.
- What are the international initiatives to control marine pollution?
- Give an account of the reasons for Delhi's air pollution, the relevant court decisions, and government actions. What, in your opinion, should be done to reduce the pollution in NCR?

Chapter 6. Ocean, Ocean Resources, and Coastal Zone

- What are the factors that determine the types of organisms found in aquatic ecosystems?
- List the main types of marine organisms. Who are the producers and consumers in the ocean?
- Describe the main features of the UN Convention on the Law of the Sea (UNCLOS).
- Explain why the following are important:
 - Coral reefs
 - Mangroves
 - Estuaries and coastal wetlands
 - Fresh water wetlands

Chapter 11. Pollution of Land

- What are the common issues in the Bhopal Gas Tragedy and the Kodaikanal Mercury Case? Why have both disasters not been fully resolved even after many attempts and many years?
- Why has pesticide poisoning become a major issue? How should we handle the excessive cancer cases in Punjab and the possible connection with pesticides?
- Explain the concept of DALY developed by the World Bank in the context of environmental health.
- What are the indicators of environmental health in India?
- Why are Indian cities unable to solve the problem of waste management in spite of court orders and government regulations?
- Explain the concept of Extended Producer Responsibility.
- Describe any two of the major international conventions that promote the proper use of hazardous chemicals and waste.
- Describe any three solutions to the problem of waste and pollution.

Chapter 16. Environmental Ethics, Laws, and Governance

- Write a note on judicial activism in India. Give two examples of cases in which the courts have assumed the role of the executive.
- What are the advantages and disadvantages of interlinking the major rivers of India?
- What are the Indian constitutional provisions for the protection of the environment?

Chapters 3 & 4. Biodiversity and its Conservation

1. In the IUCN categories, what is the difference between Critically Endangered, 'Endangered' and 'Vulnerable' species?
2. Distinguish between background extinction and mass extinction.
3. A witty person said that, 'To a first approximation, all species are extinct today'. Is this statement correct? If not, what is the correct situation about the extinction of species?
4. What are the factors that determine the level of biodiversity in an ecosystem?
5. What are the human-induced causes of biodiversity loss?
6. Which are the essential criteria for declaring an area as a Biodiversity Hotspot?
7. How the current Sixth Mass Extinction different from the previous mass extinctions?
8. Why did the Indian vulture population decline so sharply and what were the cascading effects of this decline?
9. Distinguish between species diversity and genetic diversity.
10. When is a species considered to have been 'described'?
11. What are the eight broad categories or levels in the taxonomy of species?
12. On what basis have the Megadiverse Countries been chosen?
13. List any five of the ten biogeographic zones of India.
14. Why are frogs disappearing and why is that a concern?
15. What is colony collapse and what is its impact on the world?
16. Distinguish between in-situ and ex-situ methods of conservation. Explain the advantages and disadvantages of each approach.
17. What are the main provisions of the Convention on Biological Diversity?
18. Describe the major international efforts to save biodiversity. What has been the role of India in these efforts?
19. Describe the measures taken by India to save its biodiversity.
20. Can we at all conserve all species? If that is not possible, how do we choose the species we should protect?
21. Describe the objective and design of the Svalbard Global Seed Vault.
22. What is the importance of protected areas for biodiversity conservation and what are their limitations?
23. Describe the UNESCO Man and the Biosphere Programme. What has been India's role in it?
24. Why did vultures die in such large numbers and what is being to revive their populations?
25. Explain the tradition of setting up sacred groves. What are its benefits of this practice?
26. What is the Global Tiger Initiative? What is its goal?
27. What is an Eco-sensitive zone and why is it needed?
28. What are the five Strategic Goals on which the 20 Aichi Biodiversity Targets are based?
29. What is the main purpose of the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety?
30. What has India done with regard to the UN Convention on Biological Diversity?

Question Bank for Low Priority Topics

Chapter 1. The Global and National Environment: An Overview of the Crisis

1. Explain the concept of exponential growth giving examples.
2. What is the difference between Carrying Capacity of the earth (with regard to human species) and Ecological Footprint of humanity? Which is easier to measure and why?
3. Give two examples each of principles and practices that we should follow for conserving the environment.
4. Explain the 'Polluter Pays' Principle and the 'Precautionary Principle'?

Chapter 2. Ecology and Ecosystems

1. Explain the differences between species, population, and community.
2. What is a biome? Give examples.
3. What are the main components of an ecosystem?
4. What are the abiotic factors in terrestrial biomes and aquatic life zones?
5. What is the Edge Effect and what is its importance?
6. Every organism is potential food for other organisms. Then who makes food first to get the chain going?
7. What is the main difference between a producer, a consumer, and a decomposer in an ecosystem? Explain through examples.
8. Explain a food chain and a food web.
9. What happens to the energy flow as we move up the trophic levels?
10. How can we describe the ecological niche of a species?
11. What are biogeochemical cycles? Describe the water and carbon cycles.
12. What were the questions addressed by the UN Millennium Ecosystem Assessment and what were its main findings?
13. Describe the processes of primary and secondary ecological succession.

Chapter 5. Forest, Grassland, Mountain, and Desert Ecosystems

1. Why is it difficult to define a 'forest'?
2. Why are forests important to us?
3. What are the distinguishing features of tropical forests and boreal forests?
4. What is the difference between primary and secondary forests?
5. What is meant by indirect use of forests?
6. What is the impact of deforestation?
7. What steps can we take to protect and conserve forests?
8. What is the role of the UN Forum on Forests?
9. What were the key features of the National Forest Policy of 1988?
10. What were the objectives of the National Forest Commission?

11. Explain the main features of CAMPA.
12. What are the special features of the tundra?
13. Describe the human impact on the world's forests.
14. What lessons can we learn from the Chipko Movement and the Save Silent Valley Movement?
15. How can local communities be involved in forest conservation?
15. Write an account of the international initiatives in forest conservation.

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