

CONTENTS

- 1. Environmental Economics – An Introduction 1-17**
Definition – Economic growth and development – Scope of environmental economics – Environmental segments – Ecology – Ecosystem – Organisation and structure of the ecosystem – services of the environment – Material balance model – Environmental utilization space – Relationship between environment and the economy – Environment and economic systems.
- 2. Ecology and Economic Development – The Debate 18-38**
Introduction – Environment – Development – Argument against ecology and economic development (the bane) – Argument in favour of ecology and economic development (the boon) – Conclusion.
- 3. The Interaction Between Ecology and Economic Theory 39-66**
An Introduction to input – output analysis and its importance in ecological study – Private and social costs – The Cumberland – Isard/Daly input – output models – The modified Leontief abatement model – The Ayres – Kneese model – Measures to control pollution and externalities – Pigouvian tax – Environmental regulation.
- 4. Basic Theory of Environmental Economics 67-90**
Introduction – Market failure and externalities – Meaning of market failure – Kinds of externalities – Measurement of externalities – Solution for externality – Pollution externalities and economics efficiency – Concept of social welfare – Efficiency and perfect competition – Perfect competition and externalities – What is efficiency – Definition and meaning of Pareto efficiency – Maximum social welfare and perfect competition – The problem of second best.

5. **Environmental Quality as a Public Good** 91-102
Environmental quality – Common property resource and its characteristic features – Tragedy of commons – Air – Water including marine – Forest – Land.
6. **Tragedy of Commons – An analysis with a Special Reference to Chennai** 103-133
Marina beach – Public parks – Government libraries – Solid waste management – Central station – MTC buses – Hospital waste management – Problems and suggestions.
7. **Conservation of Resources** 134-146
Conservation and preservation – Man's impact on resources – Adverse effects on resources – Conservation awareness – Methods of conservation – Material substitution – Product life extension – Recycling – Optimum recycling – Waste reduction.
8. **Need for and the Scope of Forest Conservation in India** 147-187
Reasons for conserving forests – The unique bio-diversity of India – Forest cover in India – Classification of forests – Perspectives in forest conservation – The present scenario – Per capita forest area – Benevolent role of forests – Forests and greenhouse effect – Deforestation: causes, effects and issues – Forest policies in India – Growing awareness of forestry programmes in India – Annexure containing forest fact file – Forestry institutions in India – Forest conservation and culture – The toxic tentacles of deforestation.
9. **Soil Degradation and Land Use** 188-210
Soil degradation – Soil erosion – Soil erosion by wind, water and pollution – Land degradation – Causes – Management of land – Land use – Land use statistics – Land use conflicts – Measures to control land use – Urban land use regulations – Zoning – Sub-division regulations – Building regulation – Rent control – Subsidies – Taxes – Density charges.
10. **Air Pollution** 211-249
Structure of the atmosphere – Sources of air pollution – Effects of air pollution – Green house effect – Pollution by automobiles – Industrial emissions – Industry and power generation – Rainfall acidity – Acid rain – Impacts of acid rain – Measuring

acid rain – Monitoring acid rain – Air pollution in India – Air quality control – Control of air pollution.

11. Noise Pollution 250-274

Noise – Nature of noise – Measurement of sound – Effect of noise pollution on human beings – Types of noise – Noise controlling methods – Road traffic noise and its control – Air craft and airport noise – Noise from train – Role of TNPCB on noise pollution – Ministry of environment and forests notification on noise pollution – WHO on noise pollution – Noise pollution in the sea.

12. Nuclear Energy and Pollution 275-288

Scope of nuclear energy – Effects of nuclear energy on the environment – Chernobyl case study – Three mile island case study – Environmental benefits of nuclear power generation.

13. Population and Unbanisation: Its Impact on Environment 289-320

Birth rate – Death rate – Malthusian prediction – Criticisms of Malthusian theory – Increase in population in developed and developing countries – Theory of demographic transition – Effects of over population – Urbanisation – Environmental problems and urbanisation.

14. Issues and Concepts in Environmental Protection 321-347

Poverty and underdevelopment of the third world – Issues (the basic source of the problems) – Solutions – Cost benefit analysis – Steps in cost benefit analysis – Costs and benefits in controlling pollution – The optimum level of environmental quality – Property price approach – Merits and demerits of cost benefit analysis – Environmental cost of economic growth – Beyond limits to growth – Environmental issues in different economies.

15. Policies and Strategies on Environment Protection 348-367

Pollution as an economic problem – Optimum level of pollution control – Basic approach to the problems of pollution control – Moral suasion – Direct control – Fiscal techniques – Allocation of property rights – Coase theorem – Market based environmental laws in practice – Distributive effects of environmental policy.

16. India's Environmental Policy and Performance 368-408

State of the environment – Constitutional protection – Eco – Task forces – Wild life policy – Major wild life protection projects and recent developments – The water prevention and control of pollution acts – The air act – Other important legislations – Environmental guidelines for industries – Establishment of environment protection authorities – EIA – Environment education and training – Suggestions for tomorrow.

17. International Environmental Policy (Stockholm to Doha) 409-423

Pollution as a transfrontier problem – International agreements, policies, conferences and acceptances – International Whaling Commission 1947 – IMCO 1954 – Stockholm Conference on Human Environment 1972 – OECD Environmental Committee 1974 – Helsinki Convention 1974 – OECD Meet 2001 – Basel convention 1989 – Montreal Protocol 1989 – IORORC 1996 – UNCED Rio De Janeiro 1992 – Agenda 21 – Hague conference – Doha conference.

18. Global Warming and Greenhouse Effect 424-439

Meaning of global warming – Greenhouse effect and its sources – Contribution to global warming – Response to green house effect – Ozone depletion in the stratosphere – Effects of ozone depletion – Results from global warming – Climate change convention – Contribution of India towards global warming.

19. Environmental Planning and Management 440-476

Importance of environmental planning and management – Role of the government in environmental management – Rural India – Urban India – Poverty vs. environmental quality – Social aspects – Legal aspects – Financial aspects – Environmental resource management – Management of waste land.

20. Environmental Impact Analysis/Assessment 477-492

Environmental appraisal of development plans – Economic growth and environment – Impact of agriculture on environment – Irrigation – Fertilizers – Pesticides – Impact of irrigation on environment – Impact of industrial estates on environment – Impact of transport and power on environment.

Reference 493-496