

**Part I C- Elective Paper****Paper VII – ENVIRONMENTAL EDUCATION****Course Code: 908.10****COURSE OUTLINE**

Contact Hours: 108

Max. weightage : 32

Duration of Exam: 3 hrs.

No. of credits : 4

**COURSE OBJECTIVES**

- ❖ To develop comprehensive concept about the scope and importance of environmental education.
- ❖ To develop ability to popularize the idea of conservation of nature and natural resource.
- ❖ To conscientize them about the recent environmental problem and the remedial measures to be taken at the individual, societal and governmental level.
- ❖ To provide them training for imparting environmental education to the pupils at various levels.
- ❖ To develop plan of action uplift of the environment and quality of the local area.
- ❖ To carryout research projects for improving environmental quality and imparting knowledge about environmental education.
- ❖ To develop an attitude to think globally and act locally to solve the environmental problems.

**Course Contents:****Unit I: Environmental Education****10 hrs**

Environmental Education- Meaning, Historical background  
Need and significance and objectives. Meaning of environmental  
Education based on Philosophical, sociological, ethical and cultural  
view. Structure and status of environmental education. Environmental  
Education in a global perspective.

**Unit II: Curriculum Construction for Environmental Education****10 hrs**

Curriculum planning-philosophical background, patterns of  
Environmental Education curriculum. Factors affecting curriculum  
construction.

Curriculum construction at different levels-primary, secondary and  
senior secondary.

Concept map as a tool of curriculum planning and analysis.

**Unit III: A. Independency I Environment****20 hrs**

Ecology, Concept of Ecosystem – Ecological Niche, Food chain, Food  
web, Solar Energy flow, Factors affecting food chains and food webs,  
Role of Education, Managing Natural Environments

B. Environmental Problems-Global, Regional and Local.

**Problems at Global Level**

- a. Population explosion
- b. Global warming and Green house effect.
- c. Pollution
- d. Acid rain

- e. Ozone depletion and CFCs.
- f. Industrialization and urbanization.
- g. Commercialization of agriculture.
- h. Deforestation, Extinction of species, loss of habitat and biodiversity,  
Red data book.
- i. Oil spills.

**Problems at State Level**

- a. Soil erosion
- b. Deforestation
- c. Back water management
- d. Solid waste and its disposal
- e. Destruction of mangroves
- f. Over fishing and marine pollution, shrinking of back waters.
- g. Quarrying, sand mining
- h. Food adulteration
- i. Changing cropping patterns and land use.

**Unit IV: Environment and Behaviour**

**10 hrs**

- Environmental stress; (stressors: noise, heat, air pollution, water pollution, over crowding)
- Natural disasters and calamities Disaster management.
- Effect of stressors on health and behaviour morbidity, respiratory problems, skin problems, nervous system diseases, hypertension, aggression, performance impairment etc.

### **Problems at the Local Environmental**

Specific environmental issues pertaining to the district.

### **Unit V: Environmental Planning and Management 18 hrs**

Concept and Need of Environmental Planning. Levels of Planning- micro and macro levels.

- Issues related to environmental planning
- Concept of sustainable development-Need and Scope
- Environmental management information system
- Environmental monitoring system
- Environmental accountability.- Environmental Ethics
- Conservation of energy
- Eco friendly development
- Eco tourism
- Earth summits
- Green peace.

### **Unit VI : Conservation Principles – Environmental 10 hrs**

- The need for conservation
- The philosophical basis for conservation
- Conservation of species
- Conservation of ecosystems

### **Unit VII: Problems and Issues of Environmental Education 10 hrs**

Challenges in Environmental Education- Steps taken by national, international and state organizations in the promotion of Environmental Education.

Teacher related issues-Issues related to supervision and assisting of Environmental Education.

Need of environmental psychology for teachers.

**Unit VII: Evaluation and Research in Environmental Education**

**20 hrs**

Evaluation-Need and Significance, Tools and techniques of evaluation. Different types-horizontal and vertical formative and summative, micro and macro, formal and informal, pupil achievement and teacher performance, criterion reference test and norm reference test. Diagnostic test in Environmental Education and remedial measures. Models of evaluation, (any 3 ) Difficulties in evaluation, Researches in environmental education. Recent Trends in Teaching Environmental Education.

**Advanced Practicum (Any 2 ) (10 marks)**

1. Prepare a report based on a Nature camp.
2. Conduct a survey to assess the waste water Treatment plant.
3. Preparation of a power point presentation on the Effect of Environmental stressers on health
4. Preparation of a biological album/CD on Endangered species.
5. Prepare an article on recent researches in the field of Environmental Education.

**References:**

1. Bell, Fisher. et.al.(1996) Environmental Psychology New York: Harcourt Brace College Publishers.

2. Jones M. Allan (1997) Environmental Biology New York: Routledge Introductions to Environmental Series.
3. Yearly Steven (1996) Sociology, Environmentation Globalization London: SAGE Publication.
4. Elliott David (1997) Energy, Society and Environmental London: Routledge Introduction to Environment Series.
5. Light Andrew & Katz Evic. (1996) Environmental Pragmatism. London: Environmental Philosophies Series.
6. Pepper David (1996) Modern Environmentism: An Introduction. London: Routledge.
7. Palmer Joy & Neal Philip (1996) The Handbook of Environmental Education. London: Routledge.
8. Goudie Andrew (1993) The nature of the Environment Great Britain: Hartnolls Ltd.
9. Harrison Lee (1995) Environmental Health and Safety Auditing Handbook New York: Mc. Graw-Hill inc.
10. Metah, Chetan Singh (1997) Environmental Protection and the Law. New Delhi: Ashish Publishing House.
11. Bridgeman Howard (1992) Global Air Pollution, New Delhi: CBS Publishers and Distributors.
12. Agarwal.K.C. (1995) Environmental Pollution and Law New Delhi: Agro Botanical Publishers (India).
13. Sharmakadambari (1996) Perspectives in Nuclear Toxic and Hazardous Wastes New Delhi: Common Wealth Publishers.

14. Srivasthava N. Yogendra (1995) Environmental Pollution. New Delhi: Himalaya Publishing House.
15. Jadhav.H.V. (1994) Principles of Environmental Science. New Delhi: Himalaya Publishing House.
16. Mohal.I. (1989) Environmental Pollution and Management. New Delhi: Ashion Publishing House.
17. Khoshoo (1991) Environmental Concerns and Strategies. New Delhi: Ashion Publishing House.
18. Lacey Collin and Williams Roy (1987) Education, Ecology and Development. Great Britain. Derek Doyle and Associates.
19. Vgas. L.N., Garg R.K. et.al. (1996) Contributions to the Environmental Sciences. New Delhi: Himansion Publications.
20. Seth M.S. & Iqbal S.A. (1998) Encyclopaedia of Nature and Environment. New Delhi: Discovery Publishing.

**Part I C – Elective Paper****PAPER VII – ENVIRONMENTAL EDUCATION**

Time: Three Hours

Maximum weightage : 32

**Part A****Answer any two questions. Each question carries 4 weightage**

1. Briefly examine the meaning of Environmental Education based on different dimensions of Environmental education. Validate the place of environmental education in the new and changed world order.
2. Discuss any four environmental hazards that you are familiar with. What are its consequences? Suggest Effective measure to overcome such hazards.
3. Examine the concept of 'Environmental Accountability? Suggest suitable programmes to develop environmental awareness and accountability among teachers and teacher educators.
4. Explain the need and significance of Evaluation and Research in Environmental Education. What are the different types of evaluation and research in environmental education?

**(4×2 = 8 weightage)****Part B****Answer any six Question Each Question carries 2 weightage**

5. Define the concept of conservation of natural resources. Write any four conservation strategies



6. Explain the concept – ‘Environmental monitoring system’, with reference to environmental planning.
7. ‘Conservation of energy and energy resources are the foremost need of 21<sup>st</sup> century’ – substantiate the statement
8. Select an environmental problem from your locality and suggest measures to solve it.
9. What are the different patterns for the formulation of curriculum in education?
10. Explain the concept- Environmental Education? in a global perspective.
11. International organizations play an important role in the promotion of Environmental Education. Justify with special reference to UNESCO and UNEP.
12. What is the most effective teaching strategy for Environmental Education in Primary classes? Discuss.

**(6×2 = 12 weightage)**

### **Part C**

**Answer any six questions. Each carries 1 weightage**

13. Explain the significance of ‘Mangroves’ in Environmental management.
14. Examine ‘concept map’ as a tool of curriculum planning and analysis.
15. ‘Population explosion’ can be considered as a crucial problem on environment. Bring out the impact of population explosion on environment.
16. Discuss the role of state government in promoting Environmental awareness among students. Substantiate your answer with the policies and programmes of government of Kerala

17. What are the major objective of teaching Environmental education
18. List four environmental projects that can be implemented in the secondary schools of Kerala
19. Describe the importance of world Environment Day celebration at schools
20. Explain the significance of Nature Club.

**(6×1 = 6 weightage)**

#### **Part D**

**Answer all questions. Each question carries ½ weightage**

21. Which day is celebrating as world Environment day?
22. Which is the green house gas?
23. Mention any two effects of deforestation
24. Mention impacts of population explosion
25. Write two examples of endangered species
26. Mention the consequences of global warming
27. What is meant by ecological niche
28. In which layer of atmosphere ozone layer is formed?
29. What is acid rain?
30. Mention a tool of curriculum planning and analysis
31. Differentiate between food chain and food web
32. What do you mean by Green Peace?

**(12×.5 = 6 weightage)**