



# **HAJEE KARUTHA ROWTHER HOWDIA COLLEGE**

(An Autonomous Institution Affiliated to Madurai Kamaraj University, Madurai.)

**Uthamapalayam, Theni District. Pin Code: 625 533.**

## **COMMON PAPER**

**PART – IV ENVIRONMENTAL STUDIES**

**SYLLABUS**

**Choice Based Credit System – CBCS**

**(As per TANSCH/MKU Guidelines)**

**(Academic Year 2020 -2021 onwards)**

## Details of Course Category, Code, Credits & Title

Course Category	Course Code	Course Title	Hrs	CIAE	TEE	Max. Marks	Credits
<b>Semester - II</b>							
<b>Part - IV</b>							
EVS	20UEVS21	Environmental Studies	2	25	75	100	2

Course Code	Course Title	Category	Total Hours	Credits
20UEVS21	Environmental Studies	EVS	30	2

Nature of Course	
Knowledge Oriented	✓
Skill Oriented	
Employability Oriented	
Entrepreneurship Oriented	

Course Relevance	
Local	
Regional	
National	
Global	✓

## Preamble

To enable the student acquire the knowledge of moral ethics and value based living.

## Syllabus

### UNIT I

6 Hours

Earth and its Environment: a) Earth- formation and Evolution of Earth over time - structure of Earth and its components – Atmosphere, Lithosphere, Hydrosphere and Biosphere.

b) Resources – renewable and non renewable resources

### UNIT II

6 Hours

Ecology and ecosystem concepts: a) Ecology – definition - Ecosystem : Definition – structure and function – energy flow – food chain and Food web – one example for an ecosystem

b) Biogeochemical cycles – Nitrogen, carbon, Phosphorous and Water

### UNIT III

6 Hours

Biodiversity of India: a) Introduction – definition – Values of Biodiversity - Threat to Biodiversity – Conservation of Biodiversity

b) Biodiversity of India – as a mega diversity nation – bio-geographical distribution – Hot spots of biodiversity – National Biodiversity conservation Board and its function

### UNIT IV

6 Hours

Pollution and Global issues: a) Definition, causes, effects and control measures of Air, Water, Soil, Marine, Noise, Thermal and Nuclear pollution

b) Global issues: Global Warming and Ozone layer Depletion

## UNIT V

6 Hours

Development and Disaster Management: a) Sustainable Development – Sustainable Agriculture – Organic farming, Irrigation – Water harvesting and Waste recycling – Cyber waste and management  
b) Disaster Management – Flood and Drought – Earthquake and Tsunami – Landslides and Avalanches – Cyclones and Hurricanes –Precautions, Warnings, Rescue and Rehabilitation.

### Text Books

*Environmental Studies*, Published by Madurai Kamaraj University.

### Reference Books

A. K. De, *Environmental Chemistry*, 8<sup>th</sup> Edition, New Age International (P) Limited, 2017.

### Pedagogy

Chalk & Talk, E-Resources, Group Discussion

### Teaching aids

Black Board, LCD Projector

### Course Contents and Lecture Schedule

Module No.	Topic	No. of Lectures	Content Delivery Methods
<b>UNIT - I</b>			
1.1	Formation and Evolution of Earth over time	1	Discussion
1.2	Structure of Earth	1	Discussion
1.3	Components of Earth	2	E-Resources
1.4	Renewable resources	1	Discussion
1.5	Non- renewable resources	1	E-Resources
<b>UNIT - II</b>			
2.1	Ecosystem : Definition – structure and function of ecosystem	1	Discussion
2.2	Energy flow – food chain	1	Discussion
2.3	Food web and Nitrogen cycle	1	E-Resources
2.4	Carbon cycle	1	E-Resources
2.5	Phosphorous cycle	1	E-Resources
2.6	Water cycle	1	E-Resources

<b>UNIT - III</b>			
3.1	Fundamentals of Biodiversity – Values of Biodiversity	2	Discussion
3.2	Threat to Biodiversity –Conservation of Biodiversity	1	Discussion
3.3	Biodiversity of India	1	Discussion
3.4	Bio-geographical distribution – Hot spots of biodiversity	1	E-Resources
3.5	National Biodiversity Conservation Board and Its Functions	1	Discussion
<b>UNIT - IV</b>			
4.1	Definition, causes, effects and control measures of Air and Water pollutions	1	Discussion
4.2	Definition, causes, effects and control measures of Soil pollution	1	Discussion
4.3	Definition, causes, effects and control measures of Marine and Noise pollutions	1	Discussion
4.4	Definition, causes, effects and control measures of Thermal and Nuclear pollutions	1	Discussion
4.5	Global issues: Global Warming and Ozone layer Depletion	2	E-Resources
<b>UNIT - V</b>			
5.1	Sustainable Development – Sustainable Agriculture – Organic farming, Irrigation –	1	Discussion
5.2	Water harvesting and Waste recycling – Cyber waste and management	2	E-Resources
5.3	Disaster Management – Flood and Drought	1	Discussion
5.4	Earthquake and Tsunami – Landslides and Avalanches	1	Discussion
5.5	Cyclones and Hurricanes –Precautions, Warnings, Rescue and Rehabilitation	1	E-Resources
<b>Total</b>		<b>30</b>	

**Course Designer**

**Dr. K. Abdul Rahim**

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