

AS PER AP-CBCS SYLLABUS 2023-2024

COMMON VALUE ADDED COURSE

3RD YEAR – SEMESTER - V

ENVIRONMENTAL EDUCATION

(Common to All Universities in AP)

UNIT I: CYBER SECURITY FUNDAMENTALS

Network Security Concepts: Information Assurance Fundamentals, Basics of Cryptography: Symmetric and Asymmetric, DNS, Firewalls, Virtualization, Radio-Frequency Identification Microsoft Windows Security Principles: Windows Tokens, Window Messaging, Windows Program Execution, Windows Firewall

Case Study: Install any Virtualization Software and perform various tasks

UNIT – II: ATTACKER TECHNIQUES AND MOTIVATIONS

Anti forensics, Tunneling Techniques, Fraud Techniques, and Threat Infrastructure

Case Study: Working with Free and commercial proxies available from web-hack.ru.

UNIT-III: EXPLOITATION

Techniques to gain a Foothold, Misdirection, Reconnaissance, and Disruption Methods

Case Study: Working with SQL Injection attacks and DDoS attacks

UNIT-IV: MALICIOUS CODE

Self-Replicating Malicious Code, Evading Detection and Elevating Privileges, Stealing Information and Exploitation.

Case Study: Identify latest Malwares and differentiate different types of malwares

UNIT-V: DEFENSE AND ANALYSIS TECHNIQUES

Memory Forensics, Honeypots, Malicious Code Naming, Automated Malicious Code Analysis Systems, Intrusion Detection Systems

Case Study: Identify latest Anti-Virus Softwares in the market and compare the functionality of each Anti-Virus



IMPORTANT QUESTIONS

LEVEL – 1

UNIT-I: ENVIRONMENT & NATURAL RESOURCES

- ❖ Explain the scope and importance of environmental education in today's world.4
- ❖ Discuss how man is an integral part of nature and how this relationship influences environmental balance.6
- ❖ Examine the concept of man as a product of nature with reference to evolution and ecological dependency8
- ❖ Analyze the importance of land resources in India and suggest ways to prevent land degradation 10
- ❖ Discuss the role of forests in maintaining ecological balance and evaluate the current status of forest resources in India.12
- ❖ Explain the significance of water resources in India and discuss the major issues related to water scarcity and pollution. 14
- ❖ Describe the types and sources of water resources in India and their importance for agriculture and industry. 15
- ❖ Define biodiversity and explain its importance in maintaining ecosystem stability. 17
- ❖ Elaborate on the social, ethical, moral, aesthetic, and option values of biodiversity with examples.20
- ❖ Analyze the threats to biodiversity and suggest measures for its conservation.24
- ❖ Examine the causes and consequences of biodiversity loss in India.32

UNIT-II: ENVIRONMENTAL DEGRADATION & IMPACTS

- ❖ Define environmental degradation and explain its key causes.57
- ❖ Discuss the impact of rapid human population growth on the environment.59
- ❖ Analyze how human population growth leads to land use changes and environmental stress.60
- ❖ Explain the process of land degradation and its consequences on agriculture and biodiversity. 62
- ❖ Discuss the causes and effects of soil erosion and methods to control it.64
- ❖ Examine the causes and impacts of desertification in India and worldwide.66
- ❖ Discuss the ecological and social impacts of large-scale dam construction in India.70
- ❖ Describe the conflicts over water resources within India and suggest solutions.74
- ❖ Define non-renewable energy resources and explain their major types and uses.83
- ❖ Discuss the environmental impacts of excessive use of non-renewable energy resources.85
- ❖ Describe the causes, effects, and control measures of air pollution.87
- ❖ Explain the causes and consequences of soil pollution with examples.90
- ❖ Discuss the causes and impacts of noise pollution on human and animal health.93
- ❖ Evaluate the management of biological, industrial, and solid wastes in urban areas.95
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- ❖ Explain the role of education and awareness in preventing environmental degradation. 135

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- ❖ Analyze the Forest Conservation Act and its role in preserving India's forest wealth. 205
- ❖ Discuss the Kyoto Protocol and its relevance in tackling global climate change. 209
- ❖ Describe the contributions of environmental movements like Chipko, Silent Valley, and Bishnois of Rajasthan 211

LEVEL - 2

- ❖ Define environmental education and discuss its multidisciplinary nature with suitable examples. 1
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- ❖ Describe the three levels of biodiversity: genetic, species, and ecosystem diversity with suitable illustrations. 22

- ❖ Evaluate the role of community participation in conserving forest and biodiversity resources26
- ❖ Explain how biodiversity contributes to economic development and sustainable livelihoods.28
- ❖ Discuss the interconnection between forest resources and biodiversity conservation in India.30
- ❖ Describe various conservation strategies used for protecting biodiversity in India.34
- ❖ Explain how water and land resource management contributes to sustainable environmental practices.36
- ❖ Discuss the environmental challenges faced due to human over-dependence on natural resources. 38
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UNIT-I: ENVIRONMENT & NATURAL RESOURCES

LONG ANSWER QUESTIONS

1. Define environmental education and discuss its multidisciplinary nature with suitable examples.1
2. Explain the scope and importance of environmental education in today's world.4
3. Discuss how man is an integral part of nature and how this relationship influences environmental balance.6
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8. Describe the types and sources of water resources in India and their importance for agriculture and industry.15
9. Define biodiversity and explain its importance in maintaining ecosystem stability.17

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