SHIVNERI MAHAVIDYALAYA SHIRUR ANANTPAL
TAL.SHIRUR ANANTPAL DIST.LATUR

Department of Geography

Certificate Course in Watershed Management.

SYLLABUS

B.A.THIRD YEAR.

SEMESTER PATTERN

With Effect from: June- 2023.

SHIVNERI MAHAVIDYALAYA, SHIRUR ANANTPAL, DIST.LATUR.

Choice Based Credit System (CBCS) Course Structure

Semester Pattern

Department of Geography

Certificate Course in Watershed Management. - June-2023

Question Paper Pattern & Scheme of Marking

With effect from: June -2023.

Semester	Course code	Name of the Paper	Lectures/ per week	Total no of Lect.	C.A.	ESE	Total marks	Credit
V	CCGEO	Watershed Management	03	30	10	40	50	02

(CC=Certificate Course, CA= Continuous assessment (Internal), ESE=End Semester Examination)

SHIVNERI MAHAVIDYALAYA, SHIRUR ANANTPAL, DIST.LATUR.

SYLLABUS

B. A. Third Year.

Semester – V.

Department of Geography

Certificate Course in Watershed Management. - June-2023

Mark: 50 **Period: 30**

Salient Features:

Watershed Management is need of the time it is useful to conserve soil moisture, to recharge the aquifers, to control soil erosion, it acts as a drainage channel during heavy rains and allows percolation.

Utility:

It will help to increase agriculture land and agriculture produce, to conserve the wild life, grassland, forestry, to maintain environmental balance to eradicate draught prone areas:

Learning Objectives:

To manage and utilizes the runoff water, protect, conserve and improve the land of watershed, to moderate the floods peaks at downstream area, to rehabilitate the water supply schemes in rural areas and to create water balance sheet for rural area.

Pre-requisites:

Books, Maps, Models, ICT.

Unit I: Introduction and concepts of watershed management. **10 Periods.**

A) Definition, aims and objectives of watershed management.
B) Need for watershed management.
C) Principals of watershed management.
D) Types and properties of watershed.
E) Factors affecting on watershed management.

Unit II: Soil erosion and control measures. **10 Periods.**

A) Types and factors affecting on soil erosion.
B) Measures to control erosion.
   i) Agronomical control erosion.
   ii) Engineering control erosion.

Unit III: Techniques in Watershed management. **10 Periods.**

A) Grassland development.
B) Gully plugs.
C) Tree plantation.
D) Counters building.
E) Land leveling.
F) Water conservation structures.
G) Jalyukt shivar.

Question Paper Pattern & Scheme of Marking

B. A. Third Year.

Semester - V

Department of Geography

Certificate Course in Watershed Management. - June-2023

Semester Examination, June-2023.

(MCQ Pattern)

Time: 01 Hour **Marks: 40.**

NB: **1. All questions are compulsory.**

2. Each questions carries one mark.

MCQ

1**. Question no. (01 to 40)**

DISCLAIMER

The Syllabus for the B.A. Geography Certificate course in introduction to Watershed Management aligns with agriculture land opportunities and follows guidance from the college development committee at Shivneri Mahavidyalaya, Shirur Anantpal Tal. Shirur Anantpal Dist.Latur-451344. It has been meticulously certified by the department of Geography and approved the principal, Shivneri Mahavidyalaya, Shirur Anantpal, participants are urged to use this syllabus as a comprehensive guide for their Watershed Management studies.

Certificate course: Introduction to Watershed Management

Introduction

Overview of Watershed management:

Watershed management is a comprehensive approach to managing and protecting the natural resources within a watershed. A watershed is an area of land where all the water that falls or flows through it ultimately drains into a common water body, such as a river, lake, or ocean. Watershed management focuses on sustainable development, conservation, and restoration of the land and water resources within these boundaries. Here is an overview of key aspects of watershed management.

Importance of Watershed Management:

Watershed management is of paramount importance due to its wide-ranging impacts on the environment, communities, and overall sustainable development. Here are some key reasons highlighting the importance of watershed management.

Learning Outcomes of Watershed Management:

The learning outcomes of watershed management programs are multifaceted and encompass various aspects related to environmental, social, and economic dimensions. These outcomes are intended to equip individuals and communities with the knowledge, skills, and awareness necessary to effectively manage and sustain their local watersheds. Here are some key learning outcomes associated with watershed management.

Importance & Scope of the course:

1. **Foundational knowledge of watershed management :**
   Involves understanding key concepts, principles, and components related to the sustainable management of water resources within a specific geographic area.
2. **Agricultural relevance:**
   Watershed management is highly relevant to agricultural lands as it plays a crucial role in ensuring the sustainability and productivity of farming activities. Here are several key aspects highlighting the importance of watershed management in the context of agricultural lands.
3. **Skill Enhancement:**
   Skill enhancement in watershed management involves developing a diverse set of technical, analytical, communication, and leadership skills. Individuals involved in watershed management, including professionals, community members, and decision-makers, benefit from honing these skills to effectively address the complex challenges associated with sustainable water resource management. Here are key skills relevant to watershed management.
4. **Career opportunities :**
   A career in watershed management offers a range of opportunities for individuals interested in sustainable water resource management, environmental conservation, and community development. Here are some potential career paths and job opportunities in the field of watershed management.
5. **Problem solving :**
   Problem-solving in watershed management involves addressing a range of challenges related to water resource sustainability, environmental conservation, and community well-being. Here are common problems associated with watershed management and potential strategies for problem-solving.
6. **Preparation for advanced studies :**
   Preparing for advanced studies in watershed management involves a combination of academic, practical, and professional development steps. Here's a guide on how to prepare for advanced studies in this field.

   Overall the Watershed management offers a broad range of opportunities across various sectors due to its critical role in sustainable water resource management, environmental conservation, and community development. Here are some overall opportunities in watershed management.

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Department of Geography

Certificate Course in Watershed Management. - June-2023

Time Table-2023-24

B. A. Third Year.

Semester – V

Day	Time
Monday	--
Tuesday	--
Wednesday	--
Thursday	**2:10-3:00 pm.**(OWJ) **3:50-4:40 pm.** (HDW),
Friday	--
Saturday	**2:10-3:00 pm.**(SNK)

SHIVNERI MAHAVIDYALAYA, SHIRUR ANANTPAL, DIST.LATUR.

Question Paper Pattern & Scheme of Marking
B. A. Third Year.
Semester - V
Department of Geography
Certificate Course in Watershed Management. - June-2023
Semester Examination, June-2023.
(MCQ Pattern)

Time: 01 Hour **Marks: 40.**

NB: 1. All questions are compulsory.
2. Each questions carries one mark.

MCQ

1. **What role do land use practices play in watershed management?**
   a) They have no impact on water quality
   b) They can lead to soil erosion and water pollution
   c) They only affect agriculture
   d) They promote deforestation
2. **Which factor is crucial for assessing the potential for floods in a watershed?**
   a) Low human population
   b) High vegetation cover
   c) Steep topography and slopes
   d) Efficient water management infrastructure
3. **How does urbanization typically impact watershed management?**
   a) It reduces pollution in water bodies
   b) It increases impervious surfaces, leading to runoff and pollution
   c) It promotes sustainable land use
   d) It has no effect on water quality
4. **What is the significance of community involvement in watershed management?**
   a) It hinders decision-making processes
   b) It increases conflicts among stakeholders
   c) It enhances the effectiveness and sustainability of management efforts
   d) It has no impact on watershed health
5. **Which type of soil erosion is characterized by the detachment and movement of soil particles by water droplets, forming small channels on the soil surface?**
   a) Sheet erosion
   b) Rill erosion
   c) Gully erosion
   d) Wind erosion
6. **Gully erosion is more severe than sheet erosion and is characterized by:**
   a) Small channels on the soil surface
   b) Large, well-defined channels
   c) Detachment of individual soil particles
   d) Wind-blown soil particles
7. **Wind erosion is most prevalent in areas with:**
   a) Dense vegetation cover
   b) Moist soil conditions
   c) Strong and consistent winds

d) Gentle slopes

8. **Which factor contributes significantly to accelerated soil erosion?**
   a) Increasing vegetation cover
   b) Contour plowing and terracing
   c) Heavy rainfall and improper land use
   d) Implementation of cover crops
9. **How does vegetation help in preventing soil erosion?**
   a) By promoting water runoff
   b) By reducing root binding and soil stability
   c) By providing a protective cover and stabilizing soil with roots
   d) By enhancing wind erosion
10. **Contour plowing and terracing are effective practices for soil conservation because they:**
    a) Increase water runoff
    b) Promote straight downhill plowing
    c) Slow down water flow and reduce soil erosion
    d) Encourage gully formation
11. **What is the primary purpose of grassland development?**
    a) Maximize deforestation
    b) Increase urbanization
    c) Promote sustainable grazing and biodiversity
    d) Encourage monoculture farming
12. **Why grasslands are considered important for ecosystems?**
    a) They have no ecological value
    b) They promote desertification
    c) They provide habitat for diverse plant and animal species
    d) They contribute to air pollution
13. **What is the primary purpose of tree plantation?**
    a) Maximizing air pollution
    b) Promoting deforestation
    c) Enhancing biodiversity and mitigating climate change
    d) Encouraging soil erosion
14. **Which environmental benefit is associated with trees in urban areas?**
    a) Increasing heat island effect
    b) Reducing air quality
    c) Providing shade and improving air quality
    d) Encouraging desertification
15. **How do trees contribute to carbon sequestration?**
    a) By emitting carbon dioxide
    b) By promoting deforestation
    c) By absorbing and storing carbon dioxide
    d) By causing soil degradation
16. **What is the primary objective of the Jalyukt Shivar Abhiyan in Maharashtra?**
    a) Maximizing water wastage
    b) Promoting water pollution
    c) Ensuring efficient water conservation and management
    d) Encouraging deforestation
17. **Which of the following is a key feature of Jalyukt Shivar?**
    a) Ignoring community participation
    b) Focusing only on urban areas
    c) Building check dams, farm ponds, and rejuvenating water bodies

d) Promoting excessive groundwater extraction

18. **How does Jalyukt Shivar contribute to agricultural sustainability?**
    a) By promoting water-intensive crops
    b) By encouraging inefficient irrigation practices
    c) By enhancing water availability through conservation measures
    d) By neglecting soil health
19. **What role does community involvement play in the success of Jalyukt Shivar?**
    a) It has no impact on the initiative
    b) It is crucial for the success of the program
    c) It hinders efficient water management
    d) It promotes deforestation
20. **Which level of government is primarily responsible for implementing Jalyukt Shivar?**
    a) International organizations
    b) Municipal corporations
    c) State government
    d) Central government

21. **What is watershed management?**
    a) Managing waterfalls
    b) Optimizing water resources within a specific area
    c) Urban planning
    d) Air quality control
22. **The primary aim of watershed management is to:**
    a) Maximize industrial water usage
    b) Minimize agricultural productivity
    c) Optimize water resources within a defined watershed
    d) Ignore environmental sustainability
23. **Which is NOT an objective of watershed management?**
    a) Soil conservation
    b) Flood prevention
    c) Increased water pollution
    d) Sustainable land use planning
24. **The main goal of watershed management in relation to ecosystems is to:**
    a) Disrupt natural habitat
    b) Preserve biodiversity
    c) Maximize deforestation
    d) Encourage soil erosion
25. **Key aspect of watershed management includes:**
    a) Exploiting natural resources
    b) Promoting unsustainable farming practices
    c) Balancing ecological and human needs
    d) Ignoring climate change effects
26. **Why is watershed management important?**
    a) It promotes excessive water usage
    b) It optimizes water resources and prevents environmental degradation
    c) It accelerates soil erosion
    d) It has no impact on the environment
27. **What does watershed management help prevent?**
    a) Increased flooding
    b) Depletion of groundwater

c) Enhanced water quality
d) Deforestation

28. **The need for watershed management is driven by:**
a) Ignoring land use practices
b) Promoting unsustainable agriculture
c) Balancing ecological and human needs
d) Disregarding climate change effect

29. **What role does watershed management play in agriculture?**
a) Encouraging soil erosion
b) Minimizing crop yield
c) Optimizing water use for sustainable farming
d) Ignoring the impact of land use on water quality

30. **Watershed management is crucial for:**
a) Maximizing industrial water usage
b) Ignoring the impact of human activities on the environment
c) Enhancing biodiversity
d) Encouraging deforestation

31. **Which principle emphasizes the importance of community participation in watershed management?**
a) Centralized decision-making
b) Exclusive focus on urban areas
c) Decentralized and participatory approach
d) Ignoring social aspects

32. **A key principle of watershed management is:**
a) Encouraging soil erosion
b) Promoting monoculture in agriculture
c) Sustainable land use planning
d) Ignoring the impact of climate change

33. **What does the principle of "source-to-sea" imply in watershed management?**
a) Ignoring the source of water
b) Focusing only on coastal areas
c) Addressing the entire watercourse, from its origin to the sea
d) Maximizing pollution in river mouths

34. **The principle of "integrated approach" in watershed management emphasizes:**
a) Isolating water management from other environmental aspects
b) Disconnecting social and ecological factors
c) Integrating various aspects for holistic management
d) Ignoring the interconnectedness of ecosystems

35. **What is a watershed?**
a) A water reservoir
b) An underground aquifer
c) The area draining into a common outlet
d) A water treatment plant

36. **Which type of watershed is characterized by a single, main river channel and its tributaries?**
a) Closed watershed
b) Open watershed
c) Disconnected watershed
d) Streamlined watershed

37. **What is the defining feature of an open watershed?**
    a) It has no outlet
    b) It has multiple outlets
    c) It lacks precipitation
    d) It is enclosed by mountains
38. **Which property is associated with the concept of time of concentration in watershed management?**
    a) The size of the watershed
    b) The travel time of water from the farthest point to the outlet
    c) The number of rivers in the watershed
    d) The average annual precipitation
39. **What is the primary factor determining the size of a watershed?**
    a) Human population density
    b) The area's geographical location
    c) The presence of lakes and ponds
    d) The topography and slope of the land
40. **Which factor significantly influences water availability in a watershed?**
    a) Human population density
    b) Climate and precipitation patterns
    c) The number of rivers in the watershed
    d) The size of the watershed

SHIVNERI MAHAVIDYALAYA, SHIRUR ANANTPAL, DIST.LATUR.

B .A. Third Year. (Semester – V)

Department of Geography

Certificate Course in Watershed Management. - June-2023

Semester Examination.

(MCQ Pattern)

Time: 01 Hour **Marks: 40.**

Answer Key

Question No.	Answer
01	B
02	C
03	B
04	C
05	A
06	B
07	C
08	C
09	C
10	C
11	C
12	C
13	C
14	C
15	C
16	C
17	C
18	C
19	B
20	C
21	B
22	C
23	C
24	B
25	C
26	B
27	C
28	C
29	C
30	C
31	C
32	C
33	C
34	C
35	C
36	A
37	B
38	B
39	D
40	B

SHIVNERI MAHAVIDYALAYA, SHIRUR ANANTPAL, DIST.LATUR.

B .A. Third Year. (Semester – V)

Department of Geography

Certificate Course in Watershed Management. - June-2023

B. A. Third Year.

Semester – V

List of Enrolled Student

Sr. No.	Name of the Enrolled Students
01	Ku. Shirse Tanuja Sanjay
02	Ku. Marke Vaishnavi Shrikant
03	Ku. Swami Nikita Rajkumar
04	Gaikwad Balaji Tanaji
05	Kamble Youraj Balaji
06	Thakur Ajay Awadhkishor
07	Ku. Kamble Sanghmitra Ramesh
08	Kamble Kishna Kernath
09	Chigure Pravin Nagnath
10	Ku. Shaikh Sadiya M.

H.O.D.

Guru Vishwambharkrupa Bahuuddeshiya Shikshan Prasarak Mandal Lakkadjawalga's

SHIVNERI MAHAVIDYALAYA SHIRUR ANANTPAL, DIST. LATUR.

CERTIFICATE

This is to certify that, Mr. /Miss. _ _ **Shirse Tanuja Sanjay** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

Hence Certified.

Date: 26/09/2024 .

H.O.D.
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CERTIFICATE

This is to certify that, Mr. /Miss. _ _ **Marke Vaishnavi Shrikant** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

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This is to certify that, Mr. /Miss. _ _ **Swami Nikita Rajkumar** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

Hence Certified.

Date: 26/09/2024 .

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This is to certify that, Mr. /Miss. _ _ **Gaikwad Balaji Tanaji** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

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CERTIFICATE

This is to certify that, Mr. /Miss. _ _ **Kamble Youraj Balaji** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

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SHIVNERI MAHAVIDYALAYA SHIRUR ANANTPAL, DIST. LATUR.

CERTIFICATE

This is to certify that, Mr. /Miss. _ _ **Thakur Ajay Awadhkishor** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

Hence Certified.

Date: 26/09/2024 .

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CERTIFICATE

This is to certify that, Mr. /Miss. _ _ **Kamble Sanghmitra Ramesh** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

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This is to certify that, Mr. /Miss. _ _ **Kamble Kishna Kernath** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

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CERTIFICATE

This is to certify that, Mr. /Miss. _ _ **Chigure Pravin Nagnath** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

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This is to certify that, Mr. /Miss. _ _ **Shaikh Sadiya Madarsab** *_ _ _ having successfully completed the Certificate Course in* **" WATERSHED MANAGEMENT "** *, conducted by Department of Geography during the academic year- 2023-24 .*

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