

ASSIGNMENT BOOKLET

Certificate in Water Harvesting and Management (CWHM)

(Assignment for the January and July Session 2023)

Note: First of all read the assignment/questions and instructions carefully and identify the components of an assignment. You should read the relevant sections and sub-sections of a unit while preparing your responses and write answers in your own words. Your responses should not be a verbatim reproduction of the textual materials/blocks provided for self-learning purposes. We also suggest that you may read additional materials available in your study centre or in any other library before preparing your responses. But extra reading is not a must to answer these assignments.



**School of Agriculture
Indira Gandhi National Open University
New Delhi -110068
2023**

Dear student,

Welcome to the Certificate in Water Harvesting and Management (CWHM) Programme.

We hope that you have gone through the Programme Guide of CWHM carefully. It is extremely important to complete the assignments within the stipulated time to be eligible to appear for the term-end examination. All the assignments of CWHM are Tutor Marked Assignments (TMAs) and are part of the continuous evaluation process.

Before you write the assignments, read the instructions provided in the Programme Guide carefully and go through the course materials. If you have any doubts or problems pertaining to the courses and assignments, do feel free to contact us at the School of Agriculture.

You are requested to go through the course material first and then complete the assignments. Your answers should not be a verbatim reproduction of the textual materials/blocks provided for self-learning purposes. On top of the first page of your answer sheet, please write the details exactly in the following format.

Enrollment no:.....
Name:.....
Address:.....
.....
.....
Course Code:.....
Course Title:.....
Study Centre:.....
(Name and Code)
Date:.....

Please submit your assignments at the Study Centre allotted to you before the due date as mentioned below:

Course Code	Last Date for January 2022 Session	Last Date for July 2022 Session
ONR-001	28 th February 2022	15 th August 2022
ONR-002	15 th March 2022	30 th August 2022
ONR-003	25 th March 2022	25 th September 2022

We suggest that you should retain a copy of your assignment responses.

Happy Learning! Wish you all good luck for successful completion of the programme.

Note: Minimum 35% marks in Continuous Assessment i.e., each assignment in each course is required for completion of a course for CWHM programme.

*School of Agriculture
Indira Gandhi National Open University,
Maidan Garhi, New Delhi-110068, India.*

Course Title: Introduction to Water Harvesting
Course Code: ONR-001

Maximum marks: 50

Note: Answer all the questions. Answer each question in about 500 words. All questions carry equal marks.

1.	Define rainwater harvesting. Describe its importance in water scarcity areas of different parts of the country.
2.	Describe the water as a resource.
3.	Describe various step different state governments have taken for enforcing rainwater harvesting.
4.	What is integrated watershed management? Describe its role in sustaining livelihood of rural people.
5.	Write short note any four of the following: (v) Water pollution. (ii) Project Implementing Agency (iii) Irrigation intensity (iv) Watershed. (v) Rooftop rainwater harvesting

Course Title: Basics of Hydrology
Course Code: ONR-002

Maximum marks: 50

Note: Answer all the questions. Answer each question in about 500 words. All questions carry equal marks.

1.	Describe the entire process of hydrologic cycle along with line diagram.
2.	Define infiltration. Describe the procedure of its measurements. Enlist different factors affecting infiltration.
3.	Explain the Rational method of peak runoff estimation. Write its assumptions.
4.	Define groundwater pollution. Describe the sources and impact of groundwater pollution.
5.	Write short note any four of the following: (i) Runoff (ii) Evapotranspiration (iii) Seepage Losses (iv) Water budget (v) Disinfection Process at household level

Course Title: Water Harvesting, Conservation and Utilization
Course Code: ONR-003

Maximum marks: 50

Note: Answer all the questions. Answer each question in about 500 words. All questions carry equal marks.

1.	Water conservation is important for agriculture in present scenario. Justify the statement in your words.
2.	Define artificial groundwater recharge. Write advantages of artificial groundwater recharge. Enlist methods of artificial groundwater recharge.
3.	Explain drip irrigation method. Describe role of irrigation scheduling for maximizing irrigation efficiencies.
4.	What is domestic and industrial water conservation? Explain.
5.	Write short note any four of the following: (i) <i>In-situ</i> water harvesting (ii) Border irrigation. (iii) Pond lining (iv) Water Use Efficiency (v) Indigenous Technological Knowledge (ITK)