

# Diploma in Watershed Management (DWM)

- Develop human resource for watershed development;
- Explain the principles of the watershed management and the value of working in a watershed;
- Generate awareness of sustainable development and maintenance of natural resources;
- Describe different techniques for accessing and predicting physical, chemical and socioeconomic conditions within a watershed including water quality;
- Mobilization and capacity building of rural youth, women and landless; and
- Develop skills for development of small scale irrigation and water supply structures for human and livestock through water and soil conservation strategies.

## BNRI-101 Introduction to Watershed Management

explain importance of watershed management;

- describe major watershed characteristics and criteria for selection of watersheds;
- describe institutional arrangements for implementation of watershed programmes in the country;
- explain the role of information technology in watershed management.

classify watershed area into different land capability classes.

- Assessment**
- 1) Assignments
  - 2) Term-end exam
  - 3) Guided Experiments
  - 4) Unguided Experiments

## BNRI-102 Elements of Hydrology

explain principle and importance of hydrologic cycle in water budgeting;

- calculate and estimate runoff volume;
- describe characteristics of water flow in open channels and pipes;
- compute the velocity of flowing water and discharge in an open channel;

enlist non-recording and recording types of rain gauges to measure rainfall.

- Assessment**
- 1) Assignments
  - 2) Term-end exam
  - 3) Guided Experiments
  - 4) Unguided Experiments

## BNRI-103 Soil and Water Conservation

explain the causes and processes of erosion;

- measure soil loss due to water and wind;
- describe biological and engineering measures for erosion control;
- explain different water storage structures, their planning, design and construction;
- explain concept of roof water harvesting, its need and benefits;
- describe the methods of construction and maintenance of different components of rooftop rainwater harvesting systems;

describe the importance, need, concept and methods of artificial groundwater recharge.

- Assessment**
- 1) Assignments
  - 2) Term-end exam
  - 3) Guided Experiments
  - 4) Unguided Experiments

## BNRI-104 Rainfed Farming

characterize rainfed farming regions with respect to variations in rainfall, soil type, land use, etc;

- explain trend and patterns of weather aberrations; and weather forecasting.
- describe importance of integrated farming systems in rainfed areas;
- explain indigenous technical knowledge, on-field water conservation;

explain methods of irrigation, importance of irrigation scheduling and different aspects of utilization of harvested water.

- Assessment**
- 1) Assignments
  - 2) Term-end exam
  - 3) Guided Experiments
  - 4) Unguided Experiments

## BNRI-105 Livestock and Pasture Management

discuss different breeding techniques for improving production and reproduction;

- develop strategies for control and eradication of diseases in your area/locality;
- explain the feeding of different category of animals based on their physiological condition;
- summarize the package of practices for common forages;
- explain the method of hay and silage making and the processes involved in it;
- justify the need for social forestry and community-based pasture management..

- Assessment**
- 1) Assignments
  - 2) Term-end exam
  - 3) Guided Experiments
  - 4) Unguided Experiments

## BNRI-016 Horticulture and Agroforestry System

explain importance, concepts and potentials of agroforestry;

- describe the concepts of natural resource survey and economic consideration in context of agroforestry;
- explain different types of nursery, designing and structure along with types of green and net houses used for nursery raising;
- explain general package and practices for fruit and vegetable production;
- explain the process of value addition of fruits and vegetables along with importance of labelling;
- describe fresh products marketing system and policies along with transportation and storage; and
- explain the importance of conservation of medicinal and aromatic plants.

- Assessment**
- 1) Assignments
  - 2) Term-end exam
  - 3) Guided Experiments
  - 4) Unguided Experiments

## BNRI-107 Funding, Monitoring and capacity Building

describe the funding arrangements for watershed projects;

- explain the structure, characteristics, functioning and relevance of the micro-finance in a watershed development;
- explain the importance of monitoring and evaluation in watershed development projects;
- describe the importance of capacity building for effective implementation of watershed programmes; and
- explain the importance of extension education and communication technologies in watershed extension work.

- Assessment**
- 1) Assignments
  - 2) Term-end exam
  - 3) Guided Experiments
  - 4) Unguided Experiments

## BNRP-108 Project Formulation

develop detailed project report by outlining specific problems and seeking feasible solutions..

- Assessment**
- 1) Project evaluation
  - 2) Viva-Voce Exam