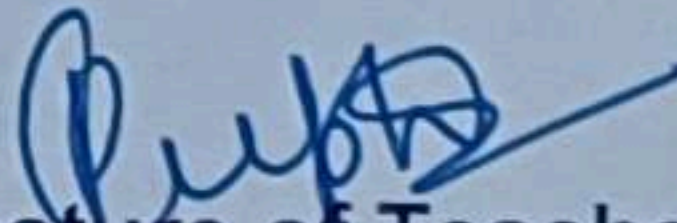


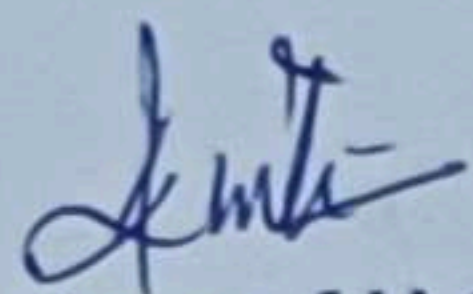
Department of Civil Engineering
Government Polytechnic Sundernagar Distt Mandi (H.P) -175018

| Lesson Plan for Water Resource Engineering (Theory) (Semester- 5th) Session: (August- Dcember, 2025) | | | | |
|---|-----------|------|--|---------|
| S.N o | MONTH | WEEK | CONTENTS | REMARKS |
| 1 | August | 2 | Unit-I Introduction to Hydrology Hydrology: Definition and Hydrological cycle Rain Gauge: Symons rain gauge, automatic rain gauge | |
| | | 3 | Methods of calculating average rainfall: Arithmetic mean, Iso-hyetal, and Thiessen polygon method. | |
| | | 4 | Runoff, Factors affecting Runoff, Computation of run-off. | |
| | | 5 | Unit-II Crop water requirement and Reservoir Planning Irrigation and its classification. Crop Water requirement: Cropping seasons, Crop period, base period, Duty, Delta, CCA, GCA, intensity of irrigation, factors affecting duty, | |
| 2 | September | 1 | Problems on water requirement Methods of application of irrigation water and its assessment. | |
| | | 2 | Silting of reservoir, Rate of silting, factors affecting silting and control measures. Class Test- 1 as per academic calender. | |
| | | 3 | Unit-III Dams and Spillways Dams and its classification: Earthen dams and Gravity dams (masonry and concrete). | |
| | | 4 | Earthen Dams- Components with function, typical cross-section, seepage through embankment and foundation and its control. Methods of construction of earthen dam, types of | |
| | | 5 | Gravity Dams-Forces acting on dam, Theoretical and practical profile, typical cross-section. (only theoretical concept) Spillways-Definition, function & location | |
| 3 | October | 1 | Unit-IV Minor and Micro Irrigation Lift irrigation Scheme-Components and their functions, Layout. | |
| | | 2 | Drip and Sprinkler Irrigation-Need, components, and Layout. Well irrigation: types and yield of wells, advantages and disadvantages of well irrigation. | |
| | | 3 | Unit-V Diversion Head Works & Canals Weirs-components, parts, types of weirs Barrages-components and their functions. Difference between weir and Barrage. Class Test - 2 as per academic calender. | |
| | | 4 | Canals- Classification according to alignment and position in the canal network, Cross section of canal in embankment and cutting, partial embankment and cutting. | |
| | | 5 | Canal lining-Purpose, material used and its properties, advantages. | |
| 4 | November | 1 | Cross Drainage Works-Aqueduct, siphon aqueduct, super passage, level crossing. Canal Regulators- Head regulator, Cross regulator, Escape, Falls and Outlets | |
| | | 2 | House Test as per academic calender. | |

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| | | 3 | Unit-VI Water logging Definition, Causes, Preventive & remedial measures, Reclamation of waterlogged areas | |
| | | 4 | Revision of Unit 1,2,3 | |
| | | 5 | Revision of Unit 4,5,6 | |

Note:- The Lesson Plan is tentative, subject to availability of time, students & faculty.


Signature of Teacher
(Er Pratik Gupta)


Signature of H.O.D
(Er Anita Joshi)