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| **Government Engineering College, Dahod**  **Department of Civil Engineering**  **Syllabus Mid-semester Examination, Sept.-2020**  **IRRIGATION ENGINEERING\_** **2170609** **B.E. 7th SEMESTER** |
| Introduction- Definition, Necessity, Scope, Benefits and ill effects of irrigation, Types of irrigation schemes, Social and environmental considerations, Irrigation development in India. Water Requirement of Crops- Soil-water-plant relation- field capacity, wilting point, available water, consumptive use, Irrigation requirements – Net irrigation requirement, Field irrigation requirement, Gross Irrigation requirement, Soil moisture extraction pattern, Frequency of irrigation, Principal Indian crops, Gross command area, Culturable command area, Intensity of irrigation, Duty and delta relation, Introduction to various methods of application of irrigation water, Irrigation efficiency, assessment of irrigation water |
| Modes of conveying irrigation water- Types of irrigation canals-contour canal, ridge canal, side sloping canals, Losses of canal water, Silting and scouring of canals, Method of design of unlined section of irrigation canal, Silt theories,(only Theory) |
| Diversion Works: Different stages of a river and their flow characteristics, Weir and barrages, Various parts of a weir and their functions, Exit gradient, Principles of weir design on permeable formations -Bligh’s creep theory and Khosla’s theory |