DEMAND

PAVIATH INTEGRATED SOLUTION

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WATER RESOURCES ENGINEERING-II

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UNIT-I
STORAGE WORKS-RESERVOIRS - TYPES OF RESERVOIRS, SELECTION OF SITE FOR RESERVOIR, ZONES OF STORAGE OF A RESERVOIR, RESERVOIR YIELD, ESTIMATION OF CAPACITY OF RESERVOIR USING MASS CURVE- RESERVOIR SEDIMENTATION – LIFE OF RESERVOIR.. TYPES OF DAMS, FACTORS AFFECTING SELECTION OF TYPE OF DAM, FACTORS GOVERNING SELECTION OF SITE FOR A DAM.

UNIT-II
GRAVITY DAMS: FORCES ACTING ON A GRAVITY DAM, CAUSES OF FAILURE OF A GRAVITY DAM, ELEMENTARY PROFILE AND PRACTICAL PROFILE OF A GRAVITY DAM, LIMITING HEIGHT OF A LOW GRAVITY DAM, FACTORS OF SAFETY - STABILITY ANALYSIS, FOUNDATION FOR A GRAVITY DAM, DRAINAGE AND INSPECTION GALLERIES.

UNIT-III
EARTH DAMS: TYPES OF EARTH DAMS, CAUSES OF FAILURE OF EARTH DAM, CRITERIA FOR SAFE DESIGN OF EARTH DAM, SEEPAGE THROUGH EARTH DAM-GRAPHICAL METHOD, MEASURES FOR CONTROL OF SEEPAGE. SPILLWAYS: TYPES OF SPILLWAYS, DESIGN PRINCIPLES OF OGEE SPILLWAYS - SPILLWAY GATES, ENERGY DISSIPATERS AND STILLING BASINS SIGNIFICANCE OF JUMP HEIGHT CURVE AND TAIL WATER RATING CURVE - USBR AND INDIAN TYPES OF STILLING BASINS.

UNIT-IV
DIVERSION HEAD WORKS: TYPES OF DIVERSION HEAD WORKS- WEIRS AND BARRAGES, LAYOUT OF DIVERSION HEAD WORK - COMPONENTS. CAUSES AND FAILURE OF WEIRS AND BARRAGES ON PERMEABLE FOUNDATIONS,- SILT EJECTORS AND SILT EXCLUDERS WEIRS ON PERMEABLE FOUNDATIONS – CREEP THEORIES - BLIGH'S, LANE'S AND KHOSLA'S THEORIES, DETERMINATION OF UPLIFT PRESSURE- VARIOUS CORRECTION FACTORS – DESIGN PRINCIPLES OF WEIRS ON PERMEABLE FOUNDATIONS USING CREEP THEORIES - EXIT GRADIENT, U/S AND D/S SHEET PILES - LAUNCHING APRON.

UNIT-V
CANAL FALLS - TYPES OF FALLS AND THEIR LOCATION, DESIGN PRINCIPLES OF NOTCH FALL AND SARADA TYPE FALL.
CANAL REGULATION WORKS, DESIGN PRINCIPLES OF DISTRIBUTORY AND HEAD REGULATORS, CROSS REGULATORS -CANAL OUTLETS, TYPES OF CANAL MODULES.
CROSS DRAINAGE WORKS: TYPES, SELECTION OF SITE, DESIGN PRINCIPLES OF AQUEDUCT, SIPHON AQUEDUCT AND SUPER PASSAGE.

TEXT BOOKS:
1. IRRIGATION ENGINEERING AND HYDRAULIC STRUCTURES BY S.K GARG, KHANNA PUBLISHERS.
2. IRRIGATION AND WATER POWER ENGINEERING BY PUNMIA & LAL, LAXMI PUBLICATIONS PVT. LTD., NEW DELHI.

REFERENCES:
1. IRRIGATION AND WATER RESOURCES ENGINEERING BY G.L. ASAWA, NEW AGE INTERNATIONAL PUBLISHERS.
2. THEORY AND DESIGN OF HYDRAULIC STRUCTURES BY VARSHNEY, GUPTA & GUPTA.
3. IRRIGATION ENGINEERING BY K.R.ARORA.
4. IRRIGATION ENGINEERING BY R.K. SHARMA AND T.K. SHARMA, S. CHAND PUBLISHERS.
5. INTRODUCTION TO HYDROLOGY BY WARREN VIESSVANN, JR, GARYL. LEWIS, PHI.
6. ENGINEERING HYDROLOGY BY CS POJHA, R. BERNDTSSON AND P. BHUNYA, OXFORD UNIVERSITY PRESS.

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ARCADIA BIM

SYLLABUS COACHING
TRAINING - 2/UNIT TRAINING
SELF - 4/UNIT ASSIGNMENT
PRESENTATION – 2/UNIT
SHOWTIME - 2/UNIT

SYLLABUS PERIOD
TRAINING – 2/2 HRS/UNIT
REMOTE - 2/2 HRS/UNIT
DURATION - SEMESTER
ONLINE/REMOTE ACCESS

FEATURES
TRAINING BY IND. PROFESSIONAL
INDUSTRY APPLICATION
TRAINER OPPORTUNITY
CERTIFICATION

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