



DEMAND

PAVIATH INTEGRATED SOLUTION

CIVIL ENGG

CIVIL UNIV

ADVANCED FOUNDATION ENGINEERING

Paviath ONLINE

◆ CIVIL UNIVERSITY ◆ FOURTH YEAR I SEMESTER ◆ CODE A70I34

UNIT - I

INTRODUCTION-BEARING CAPACITY OF FOOTINGS SUBJECTED TO ECCENTRIC AND INCLINED LOADING - MEYERHOFF'S, HANSEN'S, VESIC THEORIES - FOUNDATIONS ON LAYERED SOILS - ELASTIC SETTLEMENT OF FOOTINGS EMBEDDED IN SANDS AND CLAYS OF INFINITE THICKNESS - FOOTINGS ON SOILS OF FINITE THICKNESS-SCHMERTAMAUNN'S METHOD, JANBU METHOD.

UNIT - II

PILE FOUNDATIONS - PILE GROUPS- SETTLEMENT OF PILE GROUPS RESTING IN SANDS AND CLAYS - NEGATIVE SKIN FRICTION-UNDER REAMED PILES-LATERALLY LOADED PILES - ULTIMATE LATERAL CAPACITY - BROMS METHOD - REESE AND MATLOCK APPROACH.

UNIT - III

LATERAL EARTH PRESSURES THEORIES - RANKINE'S AND COULOMB'S THEORIES - GRAPHICAL METHODS, CULMANN'S, TRIAL WEDGE METHODS - STABILITY CHECKS OF CANTILEVER AND GRAVITY RETAINING WALLS.

UNIT - IV

CANTILEVER AND ANCHORED SHEET PILES - EARTH PRESSURE DIAGRAM - DETERMINATION OF DEPTH OF EMBEDMENT IN SANDS AND CLAYS - BRACED CUTS - EARTH PRESSURE DIAGRAMS - FORCES IN STRUTS.

UNIT - V

FOUNDATIONS IN EXPANSIVE SOILS - PROBLEMS IN EXPANSIVE SOILS - MECHANISM OF SWELLING - SWELL PRESSURE AND SWELLING POTENTIAL - HEAVE - FOUNDATION PRACTICES - SAND CUSHION - CNS TECHNIQUE - UNDER-REAMED PILE FOUNDATIONS - GRANULAR PILE ANCHOR TECHNIQUE, STABILIZATION OF EXPANSIVE SOILS.

TEXT BOOKS:

- 1) DAS, B.M., - (1999) PRINCIPLES OF FOUNDATION ENGINEERING - 4TH EDITION PWS PUBLISHING, SINGAPORE.
- 2) BOWLES, J.E., (1988) FOUNDATION ANALYSIS AND DESIGN - 4TH EDITION, MCGRAW-HILL INTERNATIONAL.
- 3) SOIL MECHANICS AND FOUNDATION ENGINEERING BY V N S MURTHY, CBS PUBLISHERS AND DISTRIBUTORS

REFERENCE BOOKS:

- 1) GEOTECHNICAL ENGINEERING PRINCIPLES AND PRACTICES BY CUDUTO, PHI INTERNATIONAL.
- 2) GEOTECHNICAL ENGINEERING BY C. VENKATARAMAH, NEW AGE INTERNATIONAL PVT.LTD, PUBLISHERS (2002).
- 3) ANALYSIS AND DESIGN OF SUBSTRUCTURES - SWAMI SARAN, OXFORD & IBH PUBLISHING COMPANY PVT.LTD (1998).
- 4) BASICS AND APPLIED SOIL MECHANICS BY GOPAL RANJAN & ASR RAD, NEW AGE INTERNATIONAL PVT.LTD, PUBLISHERS (2002).



APM Civil Engineering

STC APM

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



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



ARCADIA BIM

FEATURES
TRAINING BY IND. PROFESSIONAL
INDUSTRY APPLICATION
TRAINER OPPORTUNITY
CERTIFICATION