

**DEMAND****PAVIATH INTEGRATED SOLUTION****CIVIL ENGG****CIVIL UNIV****STRUCTURAL ANALYSIS - II****Paviath ONLINE**

◆ CIVIL UNIVERSITY ◆ THIRD YEAR II SEMESTER ◆ CODE A60131

UNIT - I

MOMENT DISTRIBUTION METHOD - ANALYSIS OF SINGLE BAY SINGLE STOREY PORTAL FRAMES INCLUDING SIDE SWAY. ANALYSIS OF INCLINED FRAMES.

KANI'S METHOD: ANALYSIS OF CONTINUOUS BEAMS INCLUDING SETTLEMENT OF SUPPORTS. ANALYSIS OF SINGLE BAY SINGLE STOREY AND SINGLE BAY TWO STOREY FRAMES BY KANI'S METHOD INCLUDING SIDE SWAY. SHEAR FORCE AND BENDING MOMENT DIAGRAMS. ELASTIC CURVE.

UNIT - II

SLOPE DEFLECTION METHOD: ANALYSIS OF SINGLE BAY - SINGLE STOREY PORTAL FRAMES BY SLOPE DEFLECTION METHOD INCLUDING SIDE SWAY. SHEAR FORCE AND BENDING MOMENT DIAGRAMS. ELASTIC CURVE. TWO HINGED ARCHES: INTRODUCTION - CLASSIFICATION OF TWO HINGED ARCHES - ANALYSIS OF TWO HINGED PARABOLIC ARCHES - SECONDARY STRESSES IN TWO HINGED ARCHES DUE TO TEMPERATURE AND ELASTIC SHORTENING OF RIB.

UNIT - III

APPROXIMATE METHODS OF ANALYSIS: INTRODUCTION - ANALYSIS OF MULTI-STOREY FRAMES FOR LATERAL LOADS: PORTAL METHOD. CANTILEVER METHOD AND FACTOR METHOD. ANALYSIS OF MULTI-STOREY FRAMES FOR GRAVITY (VERTICAL) LOADS. SUBSTITUTE FRAME METHOD. ANALYSIS OF MILL BENTS.

UNIT - IV

MATRIX METHODS OF ANALYSIS: INTRODUCTION - STATIC AND KINEMATIC INDETERMINACY - ANALYSIS OF CONTINUOUS BEAMS INCLUDING SETTLEMENT OF SUPPORTS, USING STIFFNESS METHOD. ANALYSIS OF PIN-JOINTED DETERMINATE PLANE FRAMES USING STIFFNESS METHOD- ANALYSIS OF SINGLE BAY SINGLE STOREY FRAMES INCLUDING SIDE SWAY. USING STIFFNESS METHOD. ANALYSIS OF CONTINUOUS BEAMS UP TO THREE DEGREE OF INDETERMINACY USING FLEXIBILITY METHOD. SHEAR FORCE AND BENDING MOMENT DIAGRAMS. ELASTIC CURVE.

UNIT- V

INFLUENCE LINES FOR INDETERMINATE BEAMS: INTRODUCTION - ILD FOR TWO SPAN CONTINUOUS BEAM WITH CONSTANT AND VARIABLE MOMENTS OF INERTIA. ILD FOR PROPPED CANTILEVER BEAMS. INDETERMINATE TRUSSES: DETERMINATION OF STATIC AND KINEMATIC INDETERMINACIES - ANALYSIS OF TRUSSES HAVING SINGLE AND TWO DEGREES OF INTERNAL AND EXTERNAL INDETERMINACIES - CASTIGLIANO'S SECOND THEOREM.

TEXT BOOKS:

- 1) STRUCTURAL ANALYSIS VOL -I & II BY VAZARANI AND RATWANI, KHANNA PUBLISHERS.
 - 2) STRUCTURAL ANALYSIS VOL I & II BY PUNDIT AND GUPTA., TATA MCGRAW HILL PUBLISHERS.
 - 3) STRUCTURAL ANALYSIS SI EDITION BY ASLAM KASSIMALI, CENGAGE LEARNING.
- REFERENCES:
- 1) MATRIX ANALYSIS OF STRUCTURES BY SINGH, CENGAGE LEARNING PVT. LTD.
 - 2) STRUCTURAL ANALYSIS BY HIBBELER.
 - 3) BASIC STRUCTURAL ANALYSIS BY C.S.REDDY., TATA MCGRAW HILL PUBLISHERS.
 - 4) MATRIX ANALYSIS OF STRUCTURES BY PUNDIT AND GUPTA., TATA MCGRAW HILL PUBLISHERS.
 - 5) ADVANCED STRUCTURAL ANALYSIS BY A.K.JAIN, NEM CHAND BROS.

**APM Civil Engineering****STC APM**

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

**ASCON RENG**

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