DEMAND

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REINFORCED CONCRETE STRUCTURES DESIGN & DRAWING

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UNIT –I
CONCEPTS OF RC. DESIGN – LIMIT STATE METHOD – MATERIAL STRESS- STRAIN CURVES
– SAFETY FACTORS – CHARACTERISTIC VALUES. STRESS BLOCK PARAMETERS – IS –
456 – 2000 – WORKING STRESS METHOD. BEAMS : LIMIT STATE ANALYSIS AND DESIGN OF SINGLY REINFORCED, DOUBLY REINFORCED, T AND L BEAM SECTIONS.

UNIT – II
SHEAR, TORSION AND BOND : LIMIT STATE ANALYSIS AND DESIGN OF SECTION FOR SHEAR AND TORSION – CONCEPT OF BOND, ANCHORAGE AND DEVELOPMENT LENGTH, I.S. CODE PROVISIONS. DESIGN EXAMPLES IN SIMPLY SUPPORTED AND CONTINUOUS BEAMS, DETAILING LIMIT STATE DESIGN FOR SERVICEABILITY FOR DEFLECTION, CRACKING
AND CODAL PROVISION.

UNIT - III
DESIGN OF TWO-WAY SLABS, ONE WAY SLAB, CONTINUOUS SLAB USING I S
COEFFICIENTS, CANTILEVER SLAB /CANOPY SLAB.

UNIT –IV
SHORT AND LONG COLUMNS –AXIAL LOADS, UNI AXIAL AND BIAXIAL BENDING I S CODE PROVISIONS.

UNIT – V
DESIGN OF FOOTINGS - ISOLATED (SQUARE, RECTANGULAR) AND COMBINED FOOTINGS. DESIGN OF STAIR CASE.

TEXT BOOKS:
1. LIMIT STATE DESIGNED OF REINFORCED CONCRETE – P.C.VARGHESE, PRENTICE HALL OF INDIA, NEW DELHI.
2. REINFORCED CONCRETE DESIGN BY N. KRISHNA RAJU AND R.N. PRANESH, NEW AGE INTERNATIONAL PUBLISHERS, NEW DELHI
3. REINFORCED CONCRETE DESIGN BY S.UNNIKRISHNA PILLAI & DEVDAS MENON, TATA MC.GRAW HILL, NEW DELHI.
4. FUNDAMENTALS OF REINFORCED CONCRETE BY N.C. SINHA AND S.K ROY, S. CHAND PUBLISHERS
REFERENCES :
1. FUNDAMENTALS OF REINFORCED CONCRETE DESIGN BY M.L. GAMBHIR, PRINTICE HALL OF INDIA PRIVATE LTD., NEW DELHI.
2. REINFORCED CONCRETE STRUCTURAL ELEMENTS – BEHAVIOUR, ANALYSIS AND DESIGN BY P.PURUSHOTHAM, TATA MC.GRAW-HILL, 1994.
3. PLASTICITY IN REINFORCED CONCRETE BY CHEN – CENGAGE LEARNING PVT. LTD.
4. DESIGN OF CONCRETE STRUCTURES – ARTHUS H.NILSON, DAVID DARWIN, AND
CHORLES W. DOLAR, TATA MC.GRAW-HILL, 3RD EDITION, 2005.
5. DESIGN OF REINFORCED CONCRETE FOUNDATIONS – P.C. VARGHESE PRENTICE
HALL OF INDIA, NEW DELHI.
6. REINFORCED CONCRETE STRUCTURES, VOL.1, BY B.C.PUNMIA, ASHOK KUMAR
JAIN AND ARUN KUMAR JAIN, LAXMI, PUBLICATIONS PVT. LTD., NEW DELHI
7. REINFORCED CONCRETE STRUCTURES – I.C. SYAL & A.K.GOEL, S.CHAND
PUBLISHERS.
8. LIMIT STATE DESIGN BY B.C.PUNMIA, ASHOK KUMAR JAIN AND ARUN KUMAR
JAIN, LAXMI, PUBLICATIONS PVT. LTD., NEW DELHI.

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