



DEMAND

PAVIATH INTEGRATED SOLUTION

CIVIL ENGG

CIVIL UNIV

TRANSPORTATION ENGINEERING - I

Paviath ONLINE

◆ CIVIL UNIVERSITY ◆ THIRD YEAR II SEMESTER ◆ CODE A60132

UNIT I

HIGHWAY DEVELOPMENT AND PLANNING:
HIGHWAY DEVELOPMENT IN INDIA -
NECESSITY FOR HIGHWAY PLANNING- DIFFERENT
ROAD DEVELOPMENT PLANS;
CLASSIFICATION OF ROADS - ROAD NETWORK
PATTERNS - HIGHWAY ALIGNMENT-
FACTORS AFFECTING ALIGNMENT- ENGINEERING
SURVEYS - DRAWINGS AND REPORTS
- HIGHWAY PROJECT.

UNIT - II

HIGHWAY GEOMETRIC DESIGN: IMPORTANCE OF
GEOMETRIC DESIGN - DESIGN
CONTROLS AND CRITERIA - HIGHWAY CROSS
SECTION ELEMENTS - SIGHT DISTANCE
ELEMENTS- STOPPING SIGHT DISTANCE,
OVERTAKING SIGHT DISTANCE AND
INTERMEDIATE SIGHT DISTANCE - DESIGN OF
HORIZONTAL ALIGNMENT - DESIGN OF
SUPER ELEVATION AND EXTRA WIDENING- DESIGN
OF TRANSITION CURVES-DESIGN OF
VERTICAL ALIGNMENT-GRADIENTS- VERTICAL
CURVES.

UNIT - III

TRAFFIC ENGINEERING & REGULATIONS: BASIC
PARAMETERS OF TRAFFIC- VOLUME,
SPEED AND DENSITY - TRAFFIC VOLUME STUDIES
- DATA COLLECTION AND
PRESENTATION - SPEED STUDIES - DATA
COLLECTION AND PRESENTATION - ORIGIN &
DESTINATION STUDIES, PARKING STUDIES -
ONSTREET & OFF STREET PARKING - ROAD
ACCIDENTS - CAUSES AND PREVENTIVE
MEASURES - ACCIDENT DATA RECORDING -
CONDITION DIAGRAM AND COLLISION DIAGRAMS
- TRAFFIC SIGNS - TYPES AND
SPECIFICATIONS - ROAD MARKINGS - NEED FOR
ROAD MARKINGS-TYPES OF ROAD
MARKINGS - DESIGN OF TRAFFIC SIGNALS -
WEBSTER METHOD.

UNIT - IV

INTERSECTION DESIGN: TYPES OF INTERSECTIONS
- CONFLICTS AT INTERSECTIONS -
REQUIREMENTS OF AT-GRADE INTERSECTIONS -
TYPES OF AT-GRADE INTERSECTIONS:
CHANNELIZED AND UNCHANNELIZED
INTERSECTIONS - TRAFFIC ISLANDS - TYPES OF
GRADE SEPARATED INTERSECTIONS - ROTARY
INTERSECTION - CONCEPT OF ROTARY -
DESIGN FACTORS OF ROTARY - ADVANTAGES
AND LIMITATIONS OF ROTARY
INTERSECTIONS.

UNIT - V

HIGHWAY MATERIAL, CONSTRUCTION AND
MAINTENANCE: HIGHWAY MATERIAL
CHARACTERIZATION: SUBGRADE SOIL, STONE
AGGREGATES, BITUMEN MATERIALS,
CONSTRUCTION OF GRAVEL ROADS -
CONSTRUCTION OF WATER BOUND MACADAM
ROADS - CONSTRUCTION OF BITUMINOUS
PAVEMENTS: SURFACE DRESSING, BITUMEN
BOUND MACADAM, BITUMINOUS CONCRETE -
CONSTRUCTION OF CEMENT CONCRETE
PAVEMENTS - CONSTRUCTION OF JOINTS IN
CEMENT CONCRETE PAVEMENTS - JOINT FILLER
AND SEAL - PAVEMENT FAILURES -
MAINTENANCE OF HIGHWAYS - HIGHWAY
DRAINAGE.

TEXT BOOKS:

1. HIGHWAY ENGINEERING - S.K.KHANNA &
C.E.G.JUSTO, NEMCHAND &
BROS., 7TH EDITION (2000).
 2. TRAFFIC ENGINEERING & TRANSPORTATION
PLANNING - DR.L.R.KADYALI,
KHANNA PUBLICATIONS - 6TH EDITION - 1997.
- REFERENCES:
1. PRINCIPLES OF TRAFFIC AND HIGHWAY
ENGINEERING - GARBER & HOEL,
CENGAGE LEARNING.
 2. PRINCIPLES AND PRACTICES OF HIGHWAY
ENGINEERING - DR.L.R.KADYALI
AND DR.N.BLAL - KHANNA PUBLICATIONS.
 3. HIGHWAY ENGINEERING - S.P.BINDRA ,
DHANPAT RAI & SONS. - 4TH EDITION
(1981).



APM Civil Engineering

STC APM

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



ASCON RENGA

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