

**DEMAND****PAVIATH INTEGRATED SOLUTION****CIVIL ENGG****CIVIL POLY****ENVIRONMENTAL ENGINEERING AND POLLUTION CONTROL****Paviath ONLINE****◆ CIVIL POLY ◆ III YEAR VI SEM ◆ CODE CEM62****OBJECTIVES:**

- ON COMPLETION OF THE COURSE, THE STUDENT WILL BE ABLE:
- TO KNOW THE PROCEDURE OF ESTIMATING WATER REQUIREMENTS FOR A WATER SUPPLY SCHEME.
 - TO SELECT SUITABLE SOURCES OF WATER SUPPLY AND PIPE MATERIALS.
 - TO DETERMINE THE QUALITY OF WATER, TESTING PROCEDURES AND STANDARDS FOR DRINKING WATER.
 - TO UNDERSTAND THE METHODS OF PURIFICATION OF WATER.
 - TO UNDERSTAND THE SYSTEMS OF DISTRIBUTION FOR A WATER SUPPLY SCHEME. TO UNDERSTAND THE BASIC FACTS OF SANITARY ENGINEERING, THE METHODS OF COLLECTION AND CONVEYANCE OF SEWAGE.
 - TO UNDERSTAND THE PRIMARY AND SECONDARY TREATMENT OF SEWAGE AND DISPOSAL.
 - TO KNOW THE METHODS OF DISPOSAL OF SLUDGE AND SOLID WASTES.
 - TO IDENTIFY THE VARIOUS POLLUTION AND THEIR PREVENTION.
 - TO CREATE AWARENESS ABOUT ENVIRONMENTAL IMPACT ASSESSMENT.

PART I - WATER SUPPLY ENGINEERING**1.1 QUANTITY OF WATER**

WATER SUPPLY - NEED FOR PROTECTED WATER SUPPLY
 - OBJECTIVES OF PUBLIC WATER SUPPLY SYSTEM -
 DEMAND - TYPES OF DEMAND - PER CAPITA DEMAND -
 PREDICTION OF POPULATION - PROBLEMS IN
 ARITHMETICAL INCREASE METHOD, GEOMETRICAL
 INCREASE METHOD, INCREMENTAL INCREASE METHOD
 - SOURCES OF WATER - SURFACE AND SUBSURFACE
 SOURCES.

1.2 INTAKES AND CONVEYANCE

INTAKES - TYPES OF INTAKES-DESCRIPTION OF INTAKES-
 INFILTRATION GALLERIES AND INFILTRATION WELLS IN
 RIVER BEDS - NECESSITY OF PUMPS - TYPES OF PUMPS
 - PIPES FOR CONVEYANCE OF WATER - CAST IRON,
 STEEL, G.I., CEMENT CONCRETE, R.C.C., HDPE AND PVC
 PIPES-PIPE JOINTS - LAYING AND TESTING OF PIPE
 LINES - PIPE CORROSION - CORROSION CONTROL.

3.1 SCHEDULING AND TIME MANAGEMENT

SCHEDULING- DEFINITION- PREPARATION OF
 SCHEDULE-USES AND ADVANTAGES -CLASSIFICATION
 OF SCHEDULES -METHODS OF SCHEDULING-BAR
 CHART-JOB LAYOUT-WORK BREAK DOWN CHART(WBC)-
 NETWORK FOR PROJECTS MANAGEMENT-ACTIVITY-
 EVENT-DUMMIES-BASIC ASSUMPTIONS IN CREATING A
 NETWORK - RULES FOR DEVELOPING NETWORKS -
 FULCKERSON'S RULE FOR NUMBERING THE EVENTS-
 CRITICAL PATH METHOD CRITICAL AND SUBCRITICAL
 PATHS-CRITICAL AND NON CRITICAL
 ACTIVITIES/EVENTS-SIGNIFICANCE OF CRITICAL PATH-
 SIMPLE PROBLEMS-PERT - TIME ESTIMATE -
 ESTEFT,LS,LT,LF-EARLIEST EXPECTED TIME-LATEST
 ALLOWABLE OCCURRENCE TIME - FLOATS -SLACK.
 STANDARD DEVIATION-VARIANCE- SIMPLE PROBLEMS.

PART II - SANITARY ENGINEERING**3.1 COLLECTION AND CONVEYANCE OF SEWAGE**

SANITATION - PURPOSE - TERMS - SYSTEMS OF SANITATION -
 QUANTITY OF SEWAGE - VARIATION IN RATE OF FLOW OF SEWAGE -
 ESTIMATION OF STORM WATER - PROBLEMS - MINIMUM SIZE OF
 SEWER - SHAPES OF SEWER - MATERIALS USED FOR SEWER - JOINTS
 IN SEWER LINE - LAYING AND TESTING OF SEWER LINES - VENTILATION
 OF SEWERS -CLEANING OF SEWERS.

4.1 TREATMENT AND DISPOSAL OF SEWAGE

OBJECTS OF SEWAGE TREATMENT - FLOW DIAGRAM OF SEWAGE
 TREATMENT PLANTS - TREATMENT OF SEWAGE - PRIMARY AND
 SECONDARY TREATMENTS - SCREENS - SKIMMING TANKS - GRIT
 CHAMBERS - SEDIMENTATION TANKS - FILTERS - TYPES AND
 DESCRIPTION OF FILTERS - ACTIVATED SLUDGE PROCESS - SEPTIC
 TANKS FOR ISOLATED BUILDINGS - CONSTRUCTION AND WORKING OF
 SEPTIC TANKS - DISPOSAL OF SEPTIC TANK EFFLUENT - SOAK PITS,
 DISPERSION TRENCHES - OXIDATION PONDS - SLUDGE - TYPES -
 METHODS OF SLUDGE DISPOSAL

PART III - POLLUTION CONTROL**5.1 ENVIRONMENTAL POLLUTION**

ENVIRONMENT - DEFINITION - WATER POLLUTION -
 SOURCES OF WATER POLLUTION
 - EFFECTS OF WATER POLLUTION - CONTROL OF WATER
 POLLUTION - SOIL POLLUTION - SOURCES OF SOIL
 POLLUTION - EFFECTS OF SOIL POLLUTION - CONTROL OF
 SOIL POLLUTION - NOISE POLLUTION - SOURCES OF
 NOISE POLLUTION - EFFECTS OF NOISE POLLUTION -
 CONTROL OF NOISE POLLUTION - AIR POLLUTION -
 SOURCES OF AIR POLLUTION - EFFECTS OF AIR
 POLLUTION ON HUMAN BEINGS, PLANTS, ANIMALS,
 MATERIALS - AIR POLLUTION CONTROL EQUIPMENT -
 CONTROL DEVICES FOR PARTICULATE CONTAMINANTS -
 ENVIRONMENTAL DEGRADATION - OZONE
 LAYER DEPLETION - GREEN HOUSE EFFECT - ACID RAIN.

2.1 TREATMENT OF WATER

OBJECT OF WATER TREATMENT - FLOW DIAGRAM
 OF TREATMENT PLANTS - SEDIMENTATION -
 PURPOSE - TYPES OF SEDIMENTATION -
 COAGULATION - COAGULANTS AND THEIR CHOICE
 - TYPES OF SEDIMENTATION TANKS - FILTRATION
 - THEORY OF FILTRATION - TYPES AND
 DESCRIPTION OF FILTERS - DISINFECTION OF
 WATER - METHODS - WATER SOFTENING -
 MISCELLANEOUS WATER TREATMENT (NAMES
 ONLY) - MINERAL WATER - REQUIREMENTS - R.O
 PROCESS

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

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

MATHS ILLUSTRATION - GEOMETRY EXPRESSIONS**ASCON RENG**

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

MECHANICAL EXPRESSIONS - ANALYTIX CAMS**ARCADIA BIM**

FEATURES
 TRAINING BY IND. PROFESSIONAL
 INDUSTRY APPLICATION
 TRAINER OPPORTUNITY
 CERTIFICATION