

**DEMAND****PAVIATH INTEGRATED SOLUTION****CIVIL ENGG****CIVIL POLY****CONSTRUCTION MANAGEMENT WITH MIS****Paviath ONLINE****◆ CIVIL POLY ◆ III YEAR VI SEM ◆ CODE CEM61****OBJECTIVES:**

ON COMPLETION OF THE COURSE, THE STUDENT WILL BE ABLE TO:

- DESCRIBE THE ROLE OF GOVERNMENT AND CONSTRUCTION AGENCIES IN THE FIELD OF HOUSING

- DESCRIBE THE ORGANIZATION SET UP OF PWD.

- MENTION THE CONSTRUCTION ACTIVITY AND FIXING THE CONSTRUCTION AGENCY. DESCRIBE THE ASPECTS OF INSPECTION AND QUALITY CONTROL METHODS

- DESCRIBE THE BANKING SYSTEM.

- CARRYOUT THE FEASIBILITY STUDY OF A PROJECT

- THE PROCESS OF PLANNING FOR CIVIL ENGINEERING PROJECTS. EXPLAIN THE SIGNIFICANCE OF CPM AND PERT TECHNIQUES.

- UNDERSTANDS UNDERSTAND THE TYPES OF CONTRACT SYSTEM

- STUDY THE ORGANIZATION CHART OF A CONSTRUCTION COMPANY.

- UNDERSTANDS THE CONCEPTS AND REQUIREMENT OF ENTREPRENEURSHIP PERFORM THE COMPUTATION OF NET PRESENT VALUE.

1.1 CONSTRUCTION SECTOR IN INDIA

CONSTRUCTION MANAGEMENT – DEFINITION- NEED – SCOPE - OBJECTIVES AND FUNCTIONS - ROLE OF GOVERNMENT AND PRIVATE CONSTRUCTION AGENCIES – TYPES OF CONSTRUCTION SECTORS - PUBLIC AND PRIVATE FUNCTIONS OF CONSTRUCTION MANAGEMENT IN NATIONAL DEVELOPMENT - CONSTRUCTION PRACTICE:- THE OWNER, CONSULTANT, AND CONTRACTOR - DUTIES AND RESPONSIBILITIES- VARIOUS STAGES OF A CONSTRUCTION PROJECT.

2.1 CONSTRUCTION ORGANISATIONS AND THEIR SUPERINTENDENCE FORMS OF BUSINESS ORGANIZATIONS - SOLE PROPRIETORSHIP - PARTNERSHIP - JOINT STOCK COMPANY- CO-OPERATIVE SOCIETY- AND STATE ENTERPRISES- ADVANTAGES AND DISADVANTAGES -DELEGATION OF RESPONSIBILITY, PERSONNEL REQUIREMENTS AND DIVISION OF WORKS – DECENTRALIZATION-CONSTRUCTION SUPERVISION AND SUPERINTENDENCE- REQUIREMENTS AND RESPONSIBILITIES OF EXECUTIVES OF THE PROJECT – QUALITIES OF EFFICIENT CONSTRUCTION MANAGER - PAY ROLLS AND RECORDS - PURCHASE AND DELIVERY OF CONSTRUCTION MATERIALS AND EQUIPMENTS – PERCENTAGE COMPLETION REPORT - INSURANCE RECORD - PROJECT OFFICE REQUIREMENT - ORGANISATION CHART OF A SMALL / MEDIUM / LARGE CONSTRUCTION COMPANY (BROAD OUTLINE ONLY).

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, LST, LFT- EARLIEST EXPECTED TIME- LATEST ALLOWABLE OCCURRENCE TIME – FLOATS- SLACK. STANDARD DEVIATION- VARIANCE- SIMPLE PROBLEMS.

4.1 QUALITY MANAGEMENT AND SAFETY

IMPORTANCE OF QUALITY – ELEMENTS OF QUALITY – QUALITY ASSURANCE TECHNIQUES (INSPECTION, TESTING, SAMPLING) IMPORTANCE OF SAFETY – CAUSES OF ACCIDENTS – ROLE OF VARIOUS PARTIES (DESIGNER / EMPLOYER / WORKER) IN SAFETY MANAGEMENT – BENEFITS – APPROACHES TO IMPROVE SAFETY IN CONSTRUCTION.

4.2 CONSTRUCTION DISPUTES AND THEIR SETTLEMENT INTRODUCTION – DEVELOPMENT OF DISPUTES – CATEGORIES OF DISPUTES

– MODES OF SETTLEMENTS – ARBITRATION

4.3 CONSTRUCTION LABOUR AND LEGISLATION

NEED FOR LEGISLATION - PAYMENT OF WAGES ACT - FACTORIES ACT – CONTRACT LABOUR (REGULATION AND ABOLITION) ACT – EMPLOYEES PROVIDENT FUND (EPF) ACT.

TEXT BOOK:

1. SANGA REDDY, S., – CONSTRUCTION MANAGEMENT, KUMARAN PUBLICATIONS, COIMBATORE.

2. SENGUPTA, B & H. GUHA. – CONSTRUCTION MANAGEMENT AND PLANNING, TATA MCGRAW HILL PUBLISHING COMPANY LTD., NEW DELHI

REFERENCE BOOK:

1. SEETHARAMAN, S. CONSTRUCTION ENGINEERING & MANAGEMENT – UMESH PUBLICATIONS, NAI SARAK, NEW DELHI
2. BOYD, C. & PAULSON JR. – COMPUTER APPLICATIONS IN CONSTRUCTION, TATA MCGRAW HILL PUBLISHING COMPANY LTD., NEW DELHI.
3. RANGWALA, S.C. CONSTRUCTION OF STRUCTURES AND MANAGEMENT OF WORKS CHAROTAR PUBLISHING HOUSE, ANAND 388 001, 2000
4. B C PUNMIA, – PROJECT PLANNING AND CONTROL WITH PERT AND CPM, LAXMI PUBLICATIONS

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

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