

PAVIATH INTEGRATED SOLUTION DEMAND

CIVIL ENGG

Paviath ONLINE

CIVIL POLY

ESTIMATING AND COSTING - I

◆ CIVIL POLY ◆ II YEAR IV SEM ◆ CODE CEM44

OBJECTIVES:

ON COMPLETION OF THE COURSE. THE STUDENT WILL BE FAMILIAR WITH:

- DIFFERENT TYPES OF ESTIMATES.
- DIFFERENT SYSTEMS OF ESTIMATION IN USE.
- DETERMINATION OF QUANTITY OF EARTH WORK IN EMBANKMENT AND CUTTINGS
- DETERMINATION OF RATES FOR DIFFERENT ITEMS OF WORKS.

• DETERMINATION OF QUANTITIES OF DIFFERENT ITEMS OF WORKS IN THE CONSTRUCTION OF BUILDINGS USING TRADE AND GROUP SYSTEMS.

3.1 ANALYSIS OF RATES

NAME TO DE MATES OF PREPARATION OF DATA FOR THE FOLLOWING Building Works Using Standard Data Bods: 1) Cement/ Lime Mortars; 2) plain Cement Concrete in _____ DI CEMENT, 'UME MORTARS', 2) PLUN CEMENT CONCRETE IN FOUNDATION, 'LEVELINE COURSE. 3) FOLDRING WITH CEMENT CONCRETE, PLASTERED WITH CEMENT MORTAR: 4) FLODRING WITH PCC HINSHED WITH ELUS PATEREN CEMENT CONCRETE SURRACE. 5) FLODRING WITH CUDDAPA SLABS; 6) MOSAIC/ CERAMIC TILED FLODRING, 7) BRICKWORK IN CEMENT MORTAR IN FOUNDATION: 8) BRICKWORK IN CM IN SUPER STRUCTURE, 9) BRICKWORK IN CM IN PARTITION WITH PLASTERINE; 10) RANDOM RUBBLE MASCINRY IN CM, 10) COURSED CUBBLE MASCINRY IN CM, 12) LIME-SURK CONCRETE IN WEAHTENNG CUDRSE HINSHED WITH PRESSED TILES IN CM, 13) REINFORCED CEMENT CONCRETE IN SLABS (PER JUNT VOLLIME/JUNT AREA); 44) R.C.C. IN BEAMS: 16) R.C.C. IN COLUMNS; 16) R.C.C.C. IN SUNSHAOES: 17) PLASTERING: BRICK MASCINRY WITH CM: 18) POINTING STONE MASCINRY WITH CEMENT MORTAR: 19) PAINTING THE WOOD WORK 20) PAINTING STELE SURFACES: 22) FORM WORKS (STRUTTING, WASHING THE PLASTERED SURFACES: 22) FORM WORKS (STRUTTING) WASHING THE PLASTERED SURFACES; 22) FORM WORKS (STRUTTING CENTERING, SHUTTERING ETC) FOR SLABS/BEAMS/ COLUMNS 23) FABRICATION OF STEEL REINFORCEMENT: 24) A.C. SHEET RODFINE 25) SUPPLYING AND FIXING RAIN WATER PIPES – EXERCISES.

ESTIMATION- DEFINITION OF ESTIMATE- NECESSITY OF ESTIMATES IMPORTANCE OF FAIR ESTIMATION- DUTIES AND REQUIREMENTS OF A GOOD QUANTITY SURVEYOR- TYPES OF ESTIMATES- APPROXIMATE BODD DUANTI'S DINYETON' THES DI ESTIMATES' REPRODUMATE And Detailed Estimates' main and sub estimates. Revised Estimates-supplementary estimates – maintenance/repair Estimates-taking off quantities- trade and group systems-MERITS OF TRADE/ GROUP SYSTEMS- STAGES IN DETAILED Estimation- Units of measurements for materials and works-ESTIMATION - UNITS OF MEASUREMENTS FUR MATERIALS AND WORKS DEGREE OF ACCURACY IN MEASUREMENTS- MEASUREMENT BODKS-DEDUCTION FOR DEMINISG IN MASONRY/PLASTRING/CDIDUR WASHING WORKS- PAINTING CDEFFICIENTS- CATEGORIES OF LABOURERS- MATERIAL REQUIREMENTS FOR DIFFERENT ITEMS OF WORKS- LABOUR REQUIREMENT FOR DIFFERENT ITEMS OF WORKS- LABOUR REQUIREMENT FOR DIFFERENT ITEMS OF WORKS- LABOUR REQUIREMENT FOR DIFFERENT ITEMS OF STANDARD DATA BODK- TASK OR OUT TURN OF LABOURERS - COST of materials and wages of Labour- schedule of rates-REVISION OF RATES- MARKET RATES- LEAD- COST OF CONVEYANCE 1.2 APPROXIMATE ESTIMATES

LE AFTOAMARIE EVINIAIES Neccosity of Approximate estimates- types – service unit Method- plinth Area Method - carpet Area Method- cubical Content Method- typical bay Method- rough Quantity Method EXAMPLES FOR EACH METHOD- PROBLEMS ON PREPARATION OF Preliminary/approximate estimates for building projects

4.1 TAKING DFF DUANTITIES BY TRADE SYSTEM GENERAL- METHODS OF TAKING DFF QUANTITIES- INDIVIDUAL WALL METHOD- CENTRE LINE METHOD- EXAMPLES- ENTERING THE DIMENSIONS - STANDARD FORMS FOR ENTERING DETAILED MEASURENENTS AND ABSTRACT ESTIMATES- ROUNDING DF DUANTIES: PREPARING DETAILED ESTIMATES UNING TRADE SYSTEM NUE TWEE PRE-UNITATION FOR AN UNITATION FOR THE DETAILED NUE TWEE PRE-UNITATION FOR AN UNITATION FOR AN UNITATION OF DUANTIES: PREPARING DETAILED ESTIMATES UNING TRADE SYSTEM AND TAKE OFF QUANTITIES FOR ALL ITEMS OF WORKS IN THE FOLLOWING TYPES OF BUILDINGS: A SMALL RESIDENTIAL BUILDING WITH TWO/THREE ROOMS WITH RCC FLAT ROOF, A SMALL TAKING OFF DUANTITIES BY GRUP SYSTEM General- Standard Method of Measurement- Taking off and Recording the Dimensions- Order of Taking off- Dimension Paper- Entering Dimension Paper- Spacing Dimensions-PAPER ENTERING DIMENSION PAPER SPACING DIMENSIONS-descriptions - Cancellation of Dimensions - Soluaring Dimensions- Method of Soluting- Checking The Soluaring-Casting up the Dimensions- Abstracting and Billing-Function of Abstract- use of Abstract Sheets- Order of Abstracting-Preparing the Abstract - Checking The Abstract - Casting Non Ordenmic The Abstract - Checking The Abstract - Casting Non Ordenmic The Abstract - Checking The Abstract - Casting Non Ordenmic The Abstract - Checking The Abstract - Casting AND REDUCING THE ABSTRACT- WRITING THE BILL- METHOD OF Writing the Bill- checking the Bill- preparing detailed ESTIMATE USING GROUP SYSTEM AND TAKE OFF QUANTITIES FOR ALL ITEMS OF WORKS

2.1 AREAS AND VOLUMES

AREAS OF REGULAR AND IRREGULAR SECTIONS-COMPUTATION OF AREAS OF IRREGULAR FIGURES- END ORDINATE RULE, MID ORDINATE RULE, AVERAGE Ordinate Rule, trapezdidal Rule, simpson's Rule -PROBLEMS - VOLUMES OF REGULARAND IRREGULAR SOLIDS - COMPUTATION OF VOLUMES OF IRREGULAR SOLIDS- END AREA RULE, MID AREA RULE, AVERAGE AREA OR MEAN AREA RULE, TRAPEZDIDAL RULE, SIMPSON'S OR PRISMOIDAL RULE.

2.2 EMBANKMENTS AND CUTTING

AREAS OF CROSS SECTIONS OF EMBANKMENTS OF ROADS, TANK BUNDS ETC - LEVEL SECTION AND TWO LEVEL SECTION - AREAS OF CROSS SECTIONS OF CUTTINGS OF CANALS, DRAINS ETC- LEVEL SECTION AND TWO LEVEL SECTION- DETERMINATION OF VOLUME OF EARTH WORK IN EMBANKMENT / CUTTING WITH LEVEL SECTIONS OF VARYING HEIGHTS/ DEPTHS OR WITH TWO LEVEL SECTIONS OF UNIFORM HEIGHT/ DEPTH

TEXT RUUK.

I.RANGAWALA, "ESTIMATING & COSTING" . CHAROTOR PUBLISHING:

2.N.A.SHAW, "QUANTITY SURVEYING & VALUATION", KHANNA PUBLISHERS;

REFERENCE BOOK

1.L.N.DUTTA, "ESTIMATING & COSTING", DHANPAT RAI & SONS

2.BRIDIE, "ESTIMATING & COSTING"

3.INDIAN STANDARD CODE OF PRACTICE, IS:1200



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