

**GANPATI INSTITUTE OF ENGINEERING AND TECHNOLOGY(POLY) JAGATPUR  
CUTTACK**

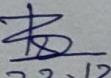
**LESSON PLAN OF 4<sup>TH</sup> SEMESTER(2025-26) CIVIL ENGINEERING**

Discipline: CIVIL ENGG.	Semester: -4 <sup>th</sup>	Name of the Teaching Faculty SWAGATIKA SAMAL
Subject: - <b>ESTIMATING COSTING AND VALUATION (Th.3)</b>	No of Days/per Week Class Allotted -03	Semester From: -22/12/2025 To:- 18/04/2026 No of Weeks: -17
Week	Class Day	Theory/ Practical Topics
1st	1st	<b>UNIT –I (Fundamentals of Estimating and Costing)</b> Estimating and Costing Meaning, purpose
	2nd	Administrative approval, Technical Sanction
	3rd	Types of methods of estimates – Approximate and Detailed estimate.
2nd	1st	Roles and responsibility of Engineers at different positions/levels
	2nd	Administrative set ups and hierarchy of Engineering Dept. in State Govt./Central Govt./PSUs
	3rd	Standard formats of Measurement sheet, Abstract sheet,
3rd	1st	Modes of measurement and desired accuracy in measurements for different items of work as per IS:1200.
	2nd	Rules for deduction in different category of work as per IS:1200.
	3rd	Description / specification of items of building work as per OPWD /DSR./CPWD/Railways
4th	1st	<b>UNIT –II (Detailed Estimate):</b> Detailed Estimate- Definition and Purpose
	2nd	Data required for detailed estimate
	3rd	Civil cost, GST, Contingencies, Supervision charges
5th	1st	Procedure for preparation of detailed estimate
	2nd	Long wall and Short wall method
	3rd	Problem Practice
6th	1st	Centre line method
	2nd	Bar bending schedule for footing, column, beam
	3rd	Lintel, chajja and slab elements
7th	1st	Provisions in detailed estimate: contingencies
	2nd	work charged establishment, percentage charges, water supply
	3rd	sanitary Charges and electrification charges etc
8th	1st	Prime cost, Provisional sum
	2nd	Provisional quantities

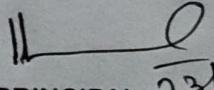
S. Samal

	3rd	Bill of quantities, Spot items or Site items
9th	1st	Detailed estimate of residential buildings using long wall short wall and centre line method
	2nd	Problem practice
	3rd	<b>UNIT –III (Estimate for Civil Engineering Works):</b> Earthwork - Quantities for roads
10th	1st	Embankment and canal by – Mid sectional area method
	2nd	Problem Practice
	3rd	mean sectional area method,
11th	1st	Prismoidal and trapezoidal formula method.
	2nd	Problem Practice
	3rd	Detailed estimate for septic tank
12th	1st	Detailed estimate for RCC culvert
	2nd	Detailed estimate for drainage siphon
	3rd	Detailed estimate for vertical fal
13th	1st	Estimate of Bituminous road
	2nd	<b>UNIT –IV (Rate Analysis):</b> Rate Analysis: Definition
	3rd	purpose and importance
14th	1st	Lead (Standard and Extra), lift
	2nd	overhead charges, water charges
	3rd	contractors' profit, procedure for rate analysis.
15th	1st	Task work- Definition, types
	2nd	Task work of different skilled labour for different items
	3rd	Categories of labours, their daily wages
16th	1st	types and number of labours for different items of work
	2nd	Transportation charges of materials
	3rd	Lead and lift
17th	1st	Hire charges of machineries and equipment.
	2nd	Preparing rate analysis of different items of work
	3rd	Pertaining to buildings and roads. (Different items of work like PCC, Plastering, Flooring, and Brick work)

S. Samal  
23.12.2025  
LECTURER

  
23.12.2025

Sr. LECTURER

  
PRINCIPAL 23/12/2025  
Principal  
GIET (Polytechnic)  
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