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| Image result for nit meghalaya logo | **National Institute of Technology Meghalaya**An Institute of National Importance | **CURRICULUM** |
| Programme | **Bachelor of Technology in Civil Engineering** | Year of Regulation | **2020-21** |
| Department | **Department of Civil Engineering** | Semester | **VIII** |
| CourseCode | Course Name | **Pre requisite** | Credit Structure | Marks Distribution |
| L | T | P | C | INT | MID | END | Total |
| **CE 416** | **Estimation, Costing and Valuation** | **Nil** | **3** | **0** | **0** | **3** | **50** | **50** | **100** | **200** |
| CourseObjectives | **To develop in the student the art and skill whereby a monetary value can be placed on the volume of work previously measured** | Course Outcomes | CO1 | **Prepare cost estimate for different item of works in a masonary structures using various methods** |
| **To develop an awareness of those factors that affect the cost of construction work and to analyze the influences that effect change in these factors** | CO2 | **Prepare cost estimate for different item of works in a RCC works & Structures** |
| **To encourage the habit of systematically recording all those statistics which are the stock in trade of the good estimator.** | CO3 | **Prepare cost estimate for different item of works in a roads& bridges** |
|  | CO4 | **Identify the main sources of current and forecast labour rates, give at least three sources for labour production rates, calculate the production rates of a variety of tradesmen in a given job** |
|  | CO5 | **Understand and prepare specification for various items of work in a contract** |
|  | CO6 | **Describe the various method of valuation** |
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| No. | COs | Mapping with Program Outcomes (POs) | Mapping with PSOs |
| PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
| 1 | CO1 | **0** | **0** | **0** | **2** | **2** | **2** | **0** | **0** | **1** | **0** | **3** | **1** | **0** | **3** | **1** |
| 2 | CO2 | **0** | **0** | **0** | **2** | **2** | **2** | **0** | **0** | **1** | **0** | **3** | **1** | **0** | **3** | **1** |
| 3 | CO3 | **0** | **0** | **0** | **2** | **2** | **2** | **0** | **0** | **1** | **0** | **3** | **1** | **0** | **3** | **1** |
| 4 | CO4 | **0** | **0** | **0** | **2** | **2** | **2** | **0** | **0** | **1** | **0** | **3** | **1** | **0** | **3** | **1** |
| 5 | CO5 | **0** | **0** | **0** | **2** | **0** | **2** | **0** | **0** | **1** | **0** | **3** | **1** | **0** | **3** | **1** |
| 6 | CO6 | **0** | **0** | **0** | **2** | **2** | **2** | **0** | **0** | **0** | **0** | **3** | **1** | **0** | **3** | **1** |
| SYLLABUS |
| No. | Content | Hours | COs |
| I | **Estimate of Building**Different items of works as per CPWD/APWD schedule such as earthwork, brickwork, cement-concrete, RCC-floors, roofs, openings, painting, white & colour washing, plastering etc. | **6** | **CO1** |
| II | **RCC Works & structures**Different items of RCC work – RCC, shuttering, measurement of reinforcing bars, standard hooks & bends, Bar-bending schedule, Estimate of RCC beam, slab column, footing & staircase. | **6** | **CO2** |
| III | **Roads & Bridges**Introduction to the different items as per CPWD/APWD schedule, estimate of earthwork of road, estimate of metalled road, estimate of RCC slab culvert, T-beam decking, Pier & well foundation, Pipe Culvert | **6** | **CO3** |
| IV | **Analysis of Rates**Analysis of Rates of Building works-RCC, PCC, Brickwork, Plastering, flooring, colour wash, Distempering, cement painting, woodwork, DPC, Doors & Windows, Roofing. | **6** | **CO4** |
| V | **Specifications**General specifications for building works-RCC, Brickwork, Plastering, Flooring, Painting, white & colour wash, Woodworks, Doors & windows, DPC, terracing, rainwater exclusion, specifications for Roadwork. | **6** | **CO5** |
| VI | **Valuations**The mathematics of valuation, valuation of freehold & leasehold properties, Fixation of Rent, Methods of valuation, Investment Method, Comparison Method, Residual Method, rein-statement Method, Contractors Method. Methods of valuation of land-comparative method, abstractive method & belting method. | **6** | **CO6** |
| Total Hours | **36** |  |
| **Essential Readings** |
| 1. Dutta, S. “Estimating and Costing in Civil Engineering”, Datta & Co.
 |
| 1. Bhasin, P.L., “Quantity Surveying”, 2nd Edition, S.Chand& Co..
 |
| 1. Kohli, D. D., “A Textbook of Estimating and Costing (Civil)” S.Chand& Co..
 |
| **Supplementary Readings** |
| 1. Dutta, B.N., “Estimating and Costing”, Kalyani Publication, Calcutta.
 |
| 1. Rangwala, S.C., “Valuation of Real Properties”, Charoter Publisher, Pune.
 |
| 1. Patil, B.S.,”CivilEngg. Contracts & Estimates”, Orient-Longman Ltd., New Delhi.
 |
| 1. CPWD, “CPWD specifications Vol-I, II, III, &IV”, Join Book Agency, New Delhi.
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