



NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY  
SERGARH-756060, BALASORE (ODISHA)  
(Approved by AICTE& affiliated to SCTE&VT, Odisha)



## LESSON PLAN

**SUBJECT: Th-4 (ESTIMATION & COST EVALUATION-I)**

### CHAPTER WISE DISTRIBUTION OF PERIODS

| Sl.No. | Name of the chapter as per the Syllabus           | No. of Periods as per the Syllabus | No. of periods actually needed |
|--------|---|------------------------------------|--------------------------------|
| 1      | Introduction :                                    | 2                                  | 5                              |
| 2      | Quantity Estimate of Building                     | 30                                 | 35                             |
| 3      | Analysis of Rates and Valuation.                  | 22                                 | 17                             |
| 4      | Administrative Set-Up of Engineering Organisation | 4                                  | 6                              |
| 5      | Total Period                                      | 60                                 | 62                             |

| Discipline:<br>CIVIL<br>ENGINEERING | Semester:<br>3rd | Name of the Teaching Faculty: Er.LOTAK KUMAR MOHAPATRA   |                        |
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|                                     |                  | SESSION : 2023-24  | EXAMINATION : 2023 (W) |
| Week                                | Class Day        | Topics to be Covered   |                        |
| 1 <sup>st</sup>                     | 1 <sup>st</sup>  | Introduction to estimating and cost evaluation-I   |                        |
|                                     | 2 <sup>nd</sup>  | 1.1 Types of estimates – Plinth area, floor area / carpet area   |                        |
|                                     | 3 <sup>rd</sup>  | 1.2 Units and modes of measurements as per IS 1200   |                        |
|                                     | 4 <sup>th</sup>  | 1.3 Accuracy of measurement for different item of work   |                        |
| 2 <sup>nd</sup>                     | 1 <sup>st</sup>  | 1.3 Accuracy of measurement for different item of work   |                        |
|                                     | 2 <sup>nd</sup>  | <b>2.0 Quantity Estimate of Building :</b><br>2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc. |                        |
|                                     | 3 <sup>rd</sup>  | 2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.   |                        |
|                                     | 4 <sup>th</sup>  | 2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.   |                        |
| 3 <sup>rd</sup>                     | 1 <sup>st</sup>  | 2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.   |                        |
|                                     | 2 <sup>nd</sup>  | 2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.   |                        |
|                                     | 3 <sup>rd</sup>  | 2.1 Short wall long wall method and centre line method, deductions in masonry, plastering, white washing, painting etc., multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.   |                        |
|                                     | 4 <sup>th</sup>  | 2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mummy room.   |                        |
| 4 <sup>th</sup>                     | 1 <sup>st</sup>  | 2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mummy room.   |                        |
|                                     | 2 <sup>nd</sup>  | 2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mummy room.   |                        |

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| 4 <sup>th</sup> | 3 <sup>rd</sup>  | 2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room. |
|                 | 4 <sup>th</sup>  | 2.2 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room. |
| 5 <sup>th</sup> | 1 <sup>st</sup>  | 2.3 multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.  |
|                 | 2 <sup>nd</sup>  | 2.3 multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.  |
|                 | 3 <sup>rd</sup>  | 2.3 multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.  |
|                 | 4 <sup>th</sup>  | 2.3 multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.  |
| 6 <sup>th</sup> | 1 <sup>st</sup>  | 2.3 multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.  |
| <b>Week</b>     | <b>Class Day</b> | <b>Topics to be Covered</b>  |
| 6 <sup>th</sup> | 2 <sup>nd</sup>  | 2.3 multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.  |
|                 | 3 <sup>rd</sup>  | 2.3 multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.  |
|                 | 4 <sup>th</sup>  | 2.3 Detailed estimate of single storied flat roof building with shallow foundation   |
| 7 <sup>th</sup> | 1 <sup>st</sup>  | 2.4 Detailed estimate of single storied flat roof building with shallow foundation   |
|                 | 2 <sup>nd</sup>  | 2.4 Detailed estimate of single storied flat roof building with shallow foundation   |
|                 | 3 <sup>rd</sup>  | 2.4 Detailed estimate of single storied flat roof building with shallow foundation   |
|                 | 4 <sup>th</sup>  | 2.4 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room. |
| 8 <sup>th</sup> | 1 <sup>st</sup>  | 2.4 Detailed estimate of single storied flat roof building with shallow foundation   |
|                 | 2 <sup>nd</sup>  | 2.4 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room. |
|                 | 3 <sup>rd</sup>  | 2.5 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room. |
|                 | 4 <sup>th</sup>  | 2.5 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room. |

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| 9 <sup>th</sup>  | 1 <sup>st</sup>  | 2.5 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.  |
|                  | 2 <sup>nd</sup>  | 2.5 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.  |
|                  | 3 <sup>rd</sup>  | 2.5 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.  |
|                  | 4 <sup>th</sup>  | 2.5 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.  |
| 10 <sup>th</sup> | 1 <sup>st</sup>  | 2.5 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.  |
|                  | 2 <sup>nd</sup>  | 2.5 Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room.  |
|                  | 3 <sup>rd</sup>  | NUMERICAL SLOVED  |
|                  | 4 <sup>th</sup>  | NUMERICAL SLOVED  |
| 11 <sup>th</sup> | 1 <sup>st</sup>  | NUMERICAL SLOVED  |
|                  | 2 <sup>nd</sup>  | <b>3.0 Analysis of Rates and Valuation :</b><br>3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering   |
| <b>Week</b>      | <b>Class Day</b> | <b>Topics to be Covered</b>   |
| 11 <sup>th</sup> | 3 <sup>rd</sup>  | <b>INTERNAL ASSESMENT</b>   |
|                  | 4 <sup>th</sup>  | <b>INTERNAL ASSESMENT</b>   |
|                  | 1 <sup>st</sup>  | <b>3.0 Analysis of Rates and Valuation :</b><br>3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
|                  | 2 <sup>nd</sup>  | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD   |

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| 12 <sup>th</sup> | 3 <sup>rd</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
|                  | 4 <sup>th</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
| 13 <sup>th</sup> | 1 <sup>st</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
|                  | 2 <sup>nd</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
|                  | 3 <sup>rd</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
|                  | 4 <sup>th</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
|                  | 1 <sup>st</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |

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| 14 <sup>th</sup> | 2 <sup>nd</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
|                  | 3 <sup>rd</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
|                  | 4 <sup>th</sup> | 3.1 Analysis of rates for cement concrete, brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar, cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring, R.C.C. with centering and shuttering, reinforcing steel, Painting of doors and windows etc. as per OPWD |
| 15 <sup>th</sup> | 1 <sup>st</sup> | 3.2 Calculation of lead, lift, conveyance charges, royalty of materials, etc. as per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions)   |
|                  | 2 <sup>nd</sup> | 3.2 Calculation of lead, lift, conveyance charges, royalty of materials, etc. as per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions)   |
|                  | 3 <sup>rd</sup> | 3.2 Calculation of lead, lift, conveyance charges, royalty of materials, etc. as per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions)   |
|                  | 4 <sup>th</sup> | 3.2 Calculation of lead, lift, conveyance charges, royalty of materials, etc. as per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions)   |
| 16 <sup>th</sup> | 1 <sup>st</sup> | 3.3 Abstract of cost of estimate.   |
|                  | 2 <sup>nd</sup> | 3.3 Abstract of cost of estimate.   |
|                  | 3 <sup>rd</sup> | 3.3 Abstract of cost of estimate.   |
|                  | 4 <sup>th</sup> | 3.3 Abstract of cost of estimate.   |
| 17 <sup>th</sup> | 1 <sup>st</sup> | <b>Administrative Set-Up of Engineering Organisations:</b><br>4.1 Administrative set-up and hierarchy of Engineering department in State Govt./Central Govt./PSUs/Private Sectors etc. Duties and responsibilities of Engineers at different positions /levels.   |
| Week             | Class Day       | Topics to be Covered  |

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| 17 <sup>th</sup> | 2 <sup>nd</sup> | 4.1Administrative set-up and hierarchy of Engineering department in State Govt./Central Govt./PSUs/Private Sectors etc. Duties and responsibilities of Engineers at different positions /levels. |
|                  | 3 <sup>rd</sup> | REVISION   |
|                  | 4 <sup>th</sup> | REVISION   |