

Lecture 36

Use of Computers in Estimation (Part 1)

Estimation & Costing

Agenda

- 1. Need for Computer-Aided Estimation
- 2. Advantages
- 3. Spreadsheet Software (Excel)
- 4. Digital Measurement Book (MB)
- 5. Summary

Need for Computer-Aided Estimation

Manual estimation involves extensive repetitive calculations, which are prone to human error.

Advantages of Software:

- **Speed:** Rapid recalculation if dimensions or rates change.
- **Accuracy:** Eliminates arithmetic errors.
- **Standardization:** Consistent formats for tenders and contracts.
- **Database linkage:** Connect directly to standard Schedule of Rates (SOR).

Spreadsheet Software (Excel)

MS Excel is the most fundamental and widely used tool for estimation.

Excel Functionality

Formulas are used to multiply L, B, and D/H. =PRODUCT(D2:F2)
Abstract sheets link dynamically to measurement sheets. If a quantity changes, the total cost updates automatically.

Provides flexibility to design custom templates.

Digital Measurement Book Template

S.No.	Description	No.	L	B	D	Qty	Total Qty
1	Earthwork in Foundation						
	Long walls	2	10.6	0.9	1.0	19.08	
	Short walls	3	4.2	0.9	1.0	11.34	
	Total						30.42 cum

Summary

Computers drastically reduce time and errors in estimation.
Excel is the backbone tool for standard measurement entries.
Next: Specialized 3D and 5D estimating software.