



***NOTES FOR STUDIES***

<b>NAME OF THE TEACHER</b>	<b><i>DR.PK SINGHAI</i></b>
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# Valuation of Building – Methods and Calculation of Valuation

Valuation of building or property is the method of calculating the present marketable cost of a building. Valuation of a building depends on the sort of building, its structure, durability, location, size, shape, the width of roads, frontage, types and quality of building materials used and the cost of these materials.

Valuation of a building also depends on the height of the plinth, height of the building, thickness of its walls, nature of structure (such as load bearing or framed structure), type of flooring, roofing, doors and windows etc.

Location of a building also plays an important role in deciding the value of a building. For example, a building located in a market area would have a stronger and higher valuation than the same building located in a residential area. Also, the buildings located in areas with proper municipal water supply, sewer and electricity have increased values. A building located on a freehold land generates a higher valuation amount compared to a building located on the leasehold land.

The valuation of a building also depends on the demands for purchase which varies from time to time. More demands make the building more valuable.

A building may provide income to the owner in the form of rent; thus valuation also depends on the income the building can generate if let out. If a building is not let out, then 6% of the capital cost of the building is considered as the annual rent. It varies from time to time and location and depends on the prevalent market rate.



Valuation of Building

### **Calculation of Valuation of Building or Property**

Age of property affects the valuation of the building, so the age of the property should be known from the records or by enquiries or from visual inspection and the future life of the building should be ascertained.

The valuation of the building is calculated by finding the present-day cost of the building and allowing a suitable depreciation. The present-day cost of the building can be calculated by:

#### **1. Cost from the Record**

The cost of construction can be determined from the estimations, the bill of quantities and using the present-day rate of building materials and labors. If the actual cost of construction of the building is known, this cost can be manipulated by using the percentage of increase or decrease to the present-day rate of materials and labors.

## **2. Cost by Detailed Measurement**

If the old record is not available, then the cost of construction can be calculated by a detailed measurement of the building and preparing the bill of quantities of various items of works. The present rate of materials and labors are used to calculate the cost of the building.

## **3. Cost by Plinth Area Method**

Plinth area method of calculating the cost of a building is simpler than the detailed measurement method which is laborious and lengthy. In this method, the plinth area of the building is measured and calculated and plinth-area rate of a similar building in the locality is obtained by enquiry and cost is calculated.

The plinth area method may not be accurate if the building is not thoroughly examined and compared with the reference building of the locality. To fix this problem, different parts of the building such as foundation, structure, floor, roof, doors, windows, finishing etc. should be thoroughly examined. If the plinth area method is judiciously used, then the cost calculation will be precise and sufficient to suit practical purposes.

## **Determination of Depreciation**

Depreciation is allowed to the current cost of the building to calculate the valuation of the building or the structure. Depreciation depends on the use of the building, age of the building and type of maintenance etc. generally, for the first 5 to 10 years, there is a very little depreciation of the building or the structure. The depreciation increases with the age of the building.

Consider a building with a life of 80 years, if well maintained, the following table shows the depreciation with the age of the building:

<b>Age of Building</b>	<b>Depreciation per Year</b>	<b>Total Depreciation</b>
0 to 5 years	–	Nil
5 to 10 years	@ 0.5%	2.5%
10 to 20 years	@ 0.75%	7.5%
20 to 40 years	@ 1 %	20 %
40 to 80 years	@ 1.5 %	60 %
	Total	90 %

The final 10% is the scrap value on the dismantling at the end of the utility period.

## **Methods of Valuation of Buildings and Properties**

**Following are the different methods of valuations of the property:**

1. Rental Method of Valuation
2. Direct comparison with capital value
3. Valuation based on profit
4. Valuation based on cost
5. Development method of valuation
6. Depreciation method of valuation

### **1. Rental Method of valuation**

In this method, net income from the building is calculated by deducting all the outgoings from gross rent. Year's purchase (Y.P.) value is calculated by assuming a suitable rate of interest

prevailing in the market. For example, consider a rate of interest as 5%, the Year's Purchase =  $100/5 = 20$  years.

The net income multiplied by the year's purchase gives the capitalized value or the valuation of the property. This method is used only when the rent is known or probable rent is determined by enquiries.

## **2. Direct Comparison with Capital Value**

When the rental value is not known, this method of direct comparison with the capital value of a similar property of the locality is used. In this case, the valuation of the property is fixed by direct comparison with the valuation or capitalized value of similar property in the locality.

## **3. Valuation based on Profit**

This method of valuation is suitable for commercial properties such as hotels, restaurants, shops, offices, malls, cinemas, theaters etc. for which the valuation depends on the profit. In such cases, the net annual income is used from the valuation after deducting all the outgoings and expenses from the gross income. The valuation of building or property is found by multiplying the net income by year's purchase. The valuation, in this case, can be too high in comparison with the actual cost of construction.

## **4. Valuation based on Cost**

In this case, the actual cost of construction of the building or the cost incurred in possessing the building is considered as the basis to determine the valuation of the property. In this case, necessary depreciation is allowed and points of obsolescence are considered.

## **5. Development method of valuation**

This method is suitable for properties which are under the developmental stage. For example, if a large piece of land is to be divided into plots after provision for roads and other amenities, this

method is used. The probable selling price of the plots, the area required for amenities and other expenditures for development is considered for valuation.

Development method of valuation is also used for properties or buildings which are required to be renovated by making alterations, additions, improvements etc. The value is calculated based on the anticipated net income generated from the building after renovation work is complete.

The net income multiplied by year's purchase gives the valuation of the property. The actual cost of the property with a total cost of renovation shall be compared with the anticipated value of the property to decide if the renovation is justified.

## 6. Depreciation Method of Valuation

Based on the depreciation method, the valuation of the buildings is divided into four parts:

1. Walls
2. Roofs
3. Floors
4. Doors and windows

Cost of each part at the present rate is calculated based on detailed measurement. The life of each part is calculated by the formula:

$$D = P [(100 - rd)/100]^n$$

**where,**

D = depreciated value

r = rate

d = depreciation

n = age of building in years

**rd values are considered as per following table:**

Life of Building	rd
100 years	1.0
75 years	1.3
50 years	2.0
25 years	4.0
20 years	5.0

The valuation calculated is exclusive of the cost of land, amenities, water supply, electrical and sanitary fittings etc. and is used only for buildings which are well maintained. If it is not well maintained, then suitable deductions are considered in the valuation calculated above. The present values of the land, amenities, water supply, electrical and sanitary fittings should be added to find the valuation of the property.