	SRI VIDYA COLLEGE OF ENGINEERING & TECHNOLOGY **VIRUDHUNAGAR**	

CE6704 ESTIMATION & QUANTITY SURVEYING

UNIT -IV

VALUATIONS

Unit - IV

-: Valuation :-

Introduction :-

Valuation is the process of assessing the current worth or cost of any property based on its present condition. properties may be movable or immovable property. Any property Ex: Vehicles, coal, oil, building materials etc,. On the other hand, lands buildings, mines, trees, quarries etc,. fall under immovable category.

Valuation is basically on the principle of economics. The factor which may be influencing, i.e,. appreciating or depreciating. value of a property demand on different conditions and locations. Hence, thorough and methodical approaches have to be made in valuing a property.

Necessity for valuation :- [★★ May/June 2013]

Necessity for valuation may arise

℗ 1

for one or more of the following

1) purchase for investment or for occupation.

2) Tax fixation.

3) sale;

4) Rent fixation,

5) insurance premium,

6) Mortgage value or Security of loans.

7) compulsary Acquisition.

8) Speculation,

9) Betterment Charges.

10) wealth tax and Estate duty.

11) Gift Tax,

12) Probate,

13) Partition,

14) Assessment of income or Stamp fees.

15) Capital gains tax.

Types of value :-

Value of property has been classified differently under different conditions which are explained below.

Scrap value :- [May/June 2013] [Nov./Dec 2012]

Scrap value is the value of dismantled materials. At the end of

②

utility period of a building, the dismantled materials as steel, bricks, timber, etc,. may fetch a certain amount which is the scrap value of the building. The scrap value of a building may be about 10% of its total cost of construction.

2. Salvage Value:— [May/June 2013]
Salvage value is the value at the end of the utility period without being dismantled. A material after the completion of its usual span of life or when it become uneconomic, may be sold and one may purchase the same for use for some other purpose, the sale value of the material is the salvage value. It does not include the cost of removal, sale, etc,.

Market Value:— [May/June 2013] [Nov.Dec 2016]
It is the amount which can be obtained at any specific time when the property is put for sale in the open market. According to demand and supply

the market value will differ from time to time.

4. Book value:- [May/June 2013] [Nov.Dec 2016] [Nov/Dec 2012] It is the amount shown in the account book after allowing necessary depreciations. Book value of material is the original cost minus the amount of depreciation upto the previous year.

5. Rateable value:-

It is the net annual letting value of a property. This is obtained after deducting the amount of yearly repairs from the gross income.

Municipal and other taxes are charged at a certain percentage on this value of the property.

6. Replacement value:-

It is the present value of a property or portions there of if these have to be replaced at the current market rates.

Capitalised value:— [May/June 2013]

The capitalised value of a property is the amount of a money whose annual interest at the highest prevailing rate of interest will be equal to the net income from the property.

Problems on capitalised value:—

A building in an A class city is let out @ Rs 5000/- per month. The total outgoings of the property is estimated to be 15% of the gross income. calculate the capitalised value of the property if the present rate of interest is 8% and the life of the property is 50 years.

Solution:—

Gross rent = $5000 \times 12 = 60,000/-$ per year.

Outgoings = 15% of gross rent.

$$= \frac{60000 \times 15}{100} = ₹ 9000/- \text{ per year.}$$

Net rent $= \dfrac{60000 - 9000}{}$

$= 51000/-$

Since the life expectancy is quite lengthy therefore, the income is considered to be perpetual hence,

$$Y.P = \dfrac{1}{R} = \dfrac{1}{0.06} = 16.67$$

Capitalised value $= 51000 \times \dfrac{1}{0.06}$

Capitalised value $= Rs\ 850000/-$

Increase sinking fund allowance is also to be accounted for

Then $Y.P = \dfrac{1}{R + S_c}$ but $S_c = \dfrac{R}{(1+R)^5 - 1}$

$$Y.P = \dfrac{0.06}{(1+0.06)^{50}} = 0.0034$$

$$Y.P = \dfrac{1}{0.06 + 0.034} = 15.77$$

Capitalised value $(C.V) = 51000 \times 15.77$

$= 8,04,270/-$.

Ⓑ

Depreciation:– [May/June 2013].

Depreciation is the gradual exhaustion of the usefulness of a property. That is it is the loss in the value of the property due to its use, life, wear, tear, decay and obsolescence. Thus the value of a building or any property other than land decreases gradually upto the utility period due to depreciation. Usually for a simple computation a certain percentage of depreciation per annum is allowed. The general decrease in value of a property is known as Annual depreciation. The annual depreciation rate is less at the begining but gradually increased during later years.

Types of depreciation:–

The Three main depreciations are,

1. Physical depreciation.

(7)

2) Functional depreciation

3) Contingent depreciation

Methods of Assessing Depreciation:—
[NOV./DEC 2012] [Nov/Dec 2008]

The Following are the methods adopted to assess depreciation.

1. Straight line method.

Annual depreciation $D = \dfrac{C - S}{n}$

Where, C = orginal cost,

S = scrap value,

n = Life of the property.

2. constant Percentage method.

Annual depreciation $D = 1 - \left[\dfrac{S}{C}\right]^{1/n}$.

3. Sinking Fund method:—

Annual sinking Fund $= \dfrac{S_i}{(1+i)^x - 1}$

where
x = Life of the building,
i = Rate of interest indecimal.

⑧

4. Quantity Survey method :-

In this method the property is studied in detail That is the loss in value in determined, due to, life, wear and tear, decay, obsolescence, etc., only experienced persons can assess the depreciation based on this method.

Problem :-

A building was constructed 40 years ago and is till existing in sound condition and hence can be presumed to serve for another 70 years. Find the depreciation of building if today's cost of construction of similar building is Rs 250000/- assume salvage value 10% of present construction cost.

Solution :-

Building age = 40 years
Construction cost = Rs 250000/-
Salvage value = 10%

⑨

To day's total depreciation of building if todays cost of construction of similar building.

$$= \frac{40}{40+70} \times 2,25,000$$

$$= Rs\ 81818/-$$

To days value of building = 250000

$$- 81818$$

$$= Rs.\ 168182$$

(i.e) approximately Rs 1.70 lakh.

Escalation:- [NOV./DEC 2012]

The cost of materials and labour are not constant over a period of contract. But they range day to day. These aspects need to be considered in completion period of a big project which may take long time.

It is impossible for a contractor to force the magnitude of such future increase at the time of submission of his tender. The result is that the contractor may not find interest to carryout the project work due to high rise of basic cost. Ultimately this delay hampers the work.

Mortgage :- [Nov/Dec 2012]

one can raise loan on interest against security of his/her property. The transaction involved, the nature of security and conditions of loans are entered in a document, known as Mortgage deed. The person advancing money is called as Mortgagee. and the person involved in borrowing of money is known as Mortgagor.

The Mortgagor or, the owner of the property can borrow money by

(11)

for the loan. The Mortgager remains in possession of his/her property and receives income there from continuously so the mortgagee is not the legal owner of the property.

Lease:- [Nov./Dec 2012]

      Lease is the legal arrangement allowing the use of a land or a building. It indicates the physical possession of the property and the use of it may be allowed by the original owner (lessor) as per lease document.

      Two main types of lease are:

    1. Building lease   2. Occupation lease.

Building lease :- Nov/Dec 2012

      The owner of a freehold land leases out his plot to some one to construct a building, on payment of a

⑫

* yearly ground rent by the lease holder.

Occupation lease :- [Nov./Dec 2012]

In this case the owner of the land built a specific type of building or any structure and built up property is given on lease for purpose of occupation for a specified period on payment of certain amount of annual rent.

Problem on Mortage and lease

Calculate the value of the property with land area 1500m², if the land is lease hold with unexpired period of lease as 60 years on the date of Valuation, calculate the value of the property as per schedule Ⅲ, part B for section 7(1) of wealth tax Act.

Solution :-

Aggregate area = 1500m²

$$\text{Specified area} = (0.65 \times 1500)$$
$$= 975 \, m^2$$

$$\text{Built up area on G.F} = 200 \, m^2$$
$$(\text{assumed})$$

$$\text{unbuit.area} = (1500 - 200) = 1300 \, m^2.$$

Difference between unbuilt area and

$$\text{Specified area} = (1300 - 975)$$
$$= 325 \, m^2$$

Percentage of aggregate. area

$$= \frac{325}{1500} \times 100$$

$$= 21.67 \, \%.$$

In this case the multiplying factor will have to be taken as 10 a per item 3(a) of the rule and as the value of the property will be worked out as

$$\text{Value of property} = 10 \times 89000$$
$$= 890000 /-$$

Final value of the property $= (1.40 \times 890000)$

Final value of the property $R_s = 1246000 /-$

Calculation of Rent:-

The rent of a building is fixed on the basis of certain percentage of annual interest on the capital cost and all possible annual expenditures on outgoings. The capital cost comprises of:-

(1) Cost of raising, levelling and dressing site.

(2) Cost of construction of building.

(3) Cost of sanitary and water supply work.

(4) Cost of Electrical installations.

5) Cost of construction of compound wall, fences and gates.

6) Cost of storm water drain.

7) Cost of approach roads and other roads with in the compound.

8) Cost of subsequent additions and alterations.

(15)

Problem on Rent or Calculation of Standard Rent:-

A building costing Rs 7,00,000 has been constructed on a freehold land measuring 100 sq.m recently. In a big city. Prevailing rate of land in the neighbourhood is Rs 150.00 per sq.m. Determine the net rent of the property, if the expenditure on an outgoing including sinking fund is Rs 24000 per annum. Work out also the gross rent of the property per month.

Solution:-

Cost of construction = Rs 7,00,000

Cost of land @ Rs 150.00 per. sq.m
$$= 100 \times 150$$
$$= 1,50,000 \text{ Rs.}$$

Net return:
on building @ 6% on the cost of construction = $7,00,000 \times \dfrac{6}{100}$
$$= \text{Rs } 42,000.00$$

on the land @ 4% on the

$$\text{Cost or land} = 1,50,000 \times \frac{4}{100}$$

$$= Rs\ 60000.00$$

Total net rent per = Rs.48000
year.

Gross rent = Net rent + outgoings

$$= 48000 + 24000,$$

$$= Rs\ 72000\ per\ annum.$$

$$\text{Gross rent per month} = \frac{72000}{12}$$

$$\text{Gross rent per month} = 6000$$

Value of Building :—

Value of Building depends

on external factors are

i) Type of building,

ii) It's structure and durability,

iii) size, shape and frontage,

iv) Width of Roadways,

Methods of Valuations :— [16marks NOV. Dec. 2016]
                                    [Nov / Dec 2008]
          Following are the different
methods of Valuation.

   1) Rental method of Valuation,
   2) Direct comparison of the capital value,
   3) Valuation based on the profit,
   4) Valuation based on the cost,
   5) Development method of Valuation,
   6) Depreciation method of Valuation.

1) Rental method of Valuation:—
              In this method, the gross rent
is calculated first and all the outgoings
are developed deducted to find ultimately
the net income. A suitable rate of
interest as prevailing in the market is
assumed and the year's purchase is
Calculated.

2) Direct comparison with capital value:—
              This method is preferred when.
the rental value is not available

form the concerned Property. On the other hand there are evidences of sale price of properties as a Whole.

3) Valuation based on profit :—
This method of Valuation is mostly suitable for profit making building such as hotels, Cinema halls, theatres etc,. Whose Capitalized value depends on the profit.

4) Valuation Based on cost :—
In this case the total expenditure Incurred in constructing the building or in possessing the property is taken as basis to determine the value of property.

5) Development method of Valuation :—
This method of valuation is used for the properties which are in the undevelope partly developed stage.

6) Depreciation Method of Valuation :—
In this method of Valuation, Primarily the building should be divided into four parts. viz. Walls, roofs and ⑲

Doors and windows.

Problems on Value of Building :-

A first class building is situated on a main road of the city, having plot area 600 sq.m. The covered area is 50% of the plot. All amenities such as water supply sanitary and electricity are provided. The age of building in 20 years. The assumed plinth area rate at the time of construction was 250/- per sq.m. Assume life of the building as 100 years and cost of the land as Rs.70/- per m^2 Find the total value of the building.

Solution :-

Plinth area of the building = 50% of plot area

$$= 600 \times \tfrac{1}{2} = 300 \, m^2.$$

Cost of the building = 300×250 = Rs 75,000/-

The depreciated cost of building $D = P\left[\dfrac{100 - rd}{100}\right]^n$

$$= 75000\left[\dfrac{100 - 1}{100}\right]^{20} \qquad \text{here rd for 100 years} = 1$$

$= 75000 \times 0.818$ = Rs 61350·00

The cost of land = 600×70 = Rs 42000.00

The total value of property = 61350 + 42000

$$= 103350.00$$

The total value of property = Rs 103350/-

(20)