CEP RVO ESTATE MANAGERS AND APPRAISERS FOUNDATION

Vivek Jagtap , Pune.

Exercise 1

Financial creditor approached National Company Law Tribunal as per company Law-2013 & IBC 2016 , against corporate debtor (CD). The decision on 1 April 2021 to go through Corporate Insolvency Resolution Procedure (CIRP) in accordance with Insolvency and Bankruptcy Code (IBC) 2016.

The land area 2000 sq.mt was given on lease for 33 years on Rs. 1,00,000/- per annum rental basis for 33 years on 1st April 2005 by CD. Lessee constructed commercial RCC building adopting 1.20 FAR in 2007. Lessee has given the commercial units on sub lease on 1 April 2007. Lease condition was after mature period of lease, building property will belongs to ownership of CD. Prevalent rate of land is Rs. 4,000/- per sq.mt & rate of RCC building construction is Rs. 20,000/- per sq.mt in 2021. CII for the year 2005, 2007, 2021 is 117,129, 301 and assuming CII in year 2038 as 903. The salvage value is 10%.

Rental Capitalization rate is 8%. Total life of RCC building is 60 years. Discounting rate for present value is 7%. Prevailing market rental is Rs.80 per Sq.m. per month for commercial space in year 2021.

Questions:-

1) What would be the valuation date as per corporate insolvency resolution process?

2) What is the value of land as on valuation date on corporate debtor's interest?

3) Projected replacement rate of construction at the end of lease period?

4) What is the depreciated value of building after end of lease period ?

5) Find depreciated present value of building at 7% discounting rate as on valuation date, considering reversionary value of building as on expiry of lease on 2038?

6) Find Estimated Fair Value of total asset on CD's interest as on CIRP commencement date?

1) Ans:- 1 April 2021, Commencement date of CIRP.

2) a) Annual rental income = Rs.100000
   = Rs. 9,12,500/-

   Y.P. = 1-Pv/i   by Investment Method

   $= \{1 - [1/(1+i)^n]\} / i$

   $= \{1-1/(1+0.08)\} \, ^{17}/0.08$

   $= \{1-1/3.7\} / 0.08$

   $= (1-0.27)/0.08 = 9.125$

   a) Rental Income for 17 years= rental income x Y.P.

            = 100000 * 9.125

            = **Rs. 9,12,500/-**

   b) Reversionary value of land after 17 years
   = 3 x 4000x 2000   [Assumed CII in the year 2038 is 903/
                                CII in the year 2021 is 301 =3]

   = 12000 x 2000 = Rs.2,40,00,000/-

   Present value Rs.2,40,00,000/- x $1/(1+0.07)^{17}$ [$1/(1+.07)^{17} = 0.3166$]

   =2,40,00,000 x 0.3166

   = Rs.75,98,400 As Rs. 76,00,000/-

   = **Rs.76,00,000**

3) Ans:- 20000 x 3 = Rs. 60,000/- per Sq.m.

4) Ans: Depreciated value= 2400 x 60000 – depreciation
= 14,40,00,000 x (1- 0.90 *31/60)
= 14,40,00,000 x 0.535
= Rs.7,70,40,000/-

5) Ans: Depreciated Present value of building =7,70,40,000 * 0.3166
                                  [$1/(1+.07)^{17} = 0.3166$]

   = 2,43,90,864/- **say as Rs.2,43,91,000**

6) Ans: =Rental income for 17 years + Reversionary Present value of Land + Depreciated present value of Building
   = **Rs.9,12,500 + Rs. 76,00,000 + Rs.2,43,91,000**
   = **Rs. 3,29,03,500/-**

Or

Estimated Fair value of property = Rental income for 17 years + Rental value of land & building on perpetual basis after expiry of lease.

Rental value of land & building on perpetual = Annual rental Income * Y.P.

$$= (2400*80*\textbf{3})*12 * 100/8 \quad \text{[Assumed CII in the year 2038 is 903/}$$
$$\text{CII in the year 2021 is 301} = \textbf{3}]$$

$$= Rs.8,64,00,000$$

Present value of Rs. 8,64,00,000 @ 7 % per annum for 17 years

$$= 8,64,00,000 * 0.3166$$

$$= Rs. 2,73,54,240$$

Estimated Fair Value= Rs.9,12,500 + Rs. 2,73,54,240

$$= \textbf{Rs. 2,82,66,740}$$

Considered Estimated Fair Value minimum of both Rs.2,82,66,740

Exercise 2

State Government Industrial Corporation leased (SGIC) 2400 sq.mt. Land for industrial unit by taking one time premium of Rs. 800/- per sq.mt. Lease period was 99 years with further renewal condition in 1990 with lease rent Rs. 1/- constructed. Constructed 1200 sq.mt factory building in 1990. Lease deed condition is when lessee transfer the property should pay 40% unearned increase in land value to SGIC, useful life of factory building is 60 years.

Replacement cost of factory building in 2021 is Rs. 18000 /- sq.mt and land value in 2021 is Rs.6000/- sq.mt.

Questions:
1) What is the unearned increase in land value?
Ans:- 6000 – 800 = Rs. 5,200/-

2) What is the lessor's interest in land value?
Ans:- 2400 x 5200 x 0.40 = Rs. 49,92,000/-

3) What is the value of lessee's interest in land value?
Ans:- 6000 x 2400 = 1,44,00,000 – 49,92,000 = Rs. 94,08,000/-

4) What is the depreciated replacement cost of factory building?
Ans:- 1200 x 18000 = Rs. 2,16,00,000/-
       31/60 x 1200 x 18000 = Rs. 1,11,60,000/-
       2,16,00,000 - 1,11,60,000 = Rs. 1,04,40,000/-

5) What is the value of lessor's interest in land & building value?
Ans:- Rs. 49,92,000/-

6) What is the value of lessee's interest in land & building value?
Ans:- 94,08,000 + 1,04,40,000 = Rs. 1,98,48,000/-

7) In perpetual lease condition with renewal clause capitalized value of land in lessor's interest is.
Ans:- Negligible.

Exercise 3

A factory building 1500 sq.mt having 15 years old. It is insured for fire against average claim clause for Rs. 60,00,000/-. The factory get loss of Rs. 20,00,000/- due to fire damage. The prevailing rate of factory building construction Rs. 20,000/- sq.mt. Use SLM for depreciation.

The cost of foundation is 10% of total cost of factory building. The total life of factory building is 30 years.

Questions:

1) What is the cost of foundation?

Ans:- Total value of building
   = 1500 x 20000 = Rs. 3,00,00,000/-
   Cost of foundation 10% of Rs. 3,00,00,000/-
   = Rs. 30,00,000/-

2) What is the depreciated cost of factory building excluding foundation?

Ans:- Depreciated of factory building excluding foundation.
   = 2,70,00,000 x 15/30 = Rs. 1,35,00,000/-

3) What will be the claim amount to be given by the insurer to insured?

Ans:- = 20,00,000/- x 60,00,000/-/1,35,00,000/-

   = Rs.8,88,900/-

4) Which method is used for valuation?

Ans:- Average claim clause under standard fire insurance policy.

Exercise 4

An owner purchased a piece of land measuring about 350 m2 and constructed a bungalow at Ground floor and first floor for his personal use some 30 years back. The bungalow is a first-class construction having a future economic life of 40 years and has got the total built up area of 300 m2. The owner now desires to sale the same and has received an offer of Rs. 55 Lakhs with vacant possession or in the alternative he has been offered gross yearly rent of Rs. 2,00,000/- for the bungalow and the plot together. There is good demand for such property in the locality. Other information is as follows:

Value of land in the locality for similar plots = Rs. 8,000 per sq.mt.
Present replacement cost of such a bungalow = Rs. 15,000 per sq.mt.
Total outgoings = 15% of the gross rent
Annual sinking fund for redemption of Re. 1 at
5% in 70 years = Rs.0.0017 per annum.
Amount of Rs. 1 per annum in 30 years at 5% = Rs. 66.439
Year's Purchase at 3% in perpetuity = 33.33

Question:
1)   What is the amount of depreciation of the bungalow?
   a)   42.86%
   b)   11.29%
   c)   15.30%
   d)   Zero

2)   What will be the depreciated replacement cost of the bungalow?
   a)   Rs. 39,91,950
   b)   Rs. 38,11,500
   c)   Rs. 35,12,250
   d)   Rs. 45,00,000

3)   What will be the insurable value for reinstatement policy?
   a)   Rs. 39,91,950
   b)   Rs. 45,00,000

c) Rs. 65,00,000

d) Rs. 38,11,500

4) What will be the market value of the property by income approach?

a) Rs. 66,66,000

b) Rs. 56,66,000

c) Rs. 55,00,000

d) Rs. 50,00,000

Data: Area of plot 350 sq.m. Total life 70 years.

Built up area of Bungalow 300 sq.m. Spent life : 30 years,

Annual gross rental: Rs.2,00,000/- Out goings: 15 % i.e. Rs.30,000/-

Net annual Rental: Rs.1,70,000/-

Annual sinking fund for redemption of Rs.1 at 5% in 70 years = Rs.0.0017 per annum.

Annual sinking fund $\mathbf{Asf = i/(1 + i)^{\wedge n} - 1} = 0.05/(1+0.05)^{\wedge 70}$ -1

$$= 0.05/30.4264 - 1$$

$$= 0.05/29.4264$$

$$= Rs.0.0017 \text{ per annum.}$$

Amount of Rs. 1 per annum in 30 years at 5% = Rs. 66.439

Amount of Rs. 1 per annum $\mathbf{A = (1 + i)^{\wedge n} - 1/i}$

$$= (1+0.05)^{\wedge 30} -1/0.05$$

$$= 4.3219 - 1/0.05$$

$$= 3.3219/0.05$$

$$= Rs.66.439$$

Answer 1. Formula: Net % Depreciation = Amt. of Re.1 for spent life* Annual sinking fund for redumption of Re.1 for full life span.* 100

=Depreciation in percentage = 66.439 * 0.0017 * 100

$$= \mathbf{11.29\ \%}$$

Answer 2. Replacement cost of building = 300 sq.m. * Rs.15,000/-

$$= Rs.45,00,000/-$$

Depreciation amount: Rs.45,00,000/- * 0.1129 = Rs.5,08,050/-

Depreciated Replacement cost = Rs.45,00,000/- - Rs.5,08,050/-

$$= \mathbf{Rs.39,91,950/-}$$

Answer 3. **Rs.45,00,000/-**

Answer 4. Market value by income approach = Net annual return * Y.P.

$$= Rs.1,70,000/- * 33.33$$

$$= Rs.56,66,000/-$$

Y.P.: Year's purchase at 3% in perpetuity = 33.33

$$= 1/i$$
$$= 100/3$$
$$= 33.33$$

Exercise 5

A company is prepared to pay a rent of Rs.15,000/- per annum, provided renovation work around Rs.50,000/- is carried out by the owners. The owner desires that, the renovation should be carried out by the company and is prepared to accept a low rent.

Question:

What rent so the company offer on 9 percent rate of interest?

Present value of Rs.1 per annum at the 9% & 5% for 15 years is 7.334

    a) **Rs. 8,182/-**
    b) Rs. 3,668/-
    c) Rs.11,667/-
    d) Rss.12,141/-

Answer:

$$Y.P. = \frac{1}{R+S} = \frac{1}{0.136343} = 7.334$$

$$= \frac{1}{0.09 + S}$$

$$= \frac{1}{0.09 + 0.04634}$$

$$S = \frac{i}{(1+i)^n - 1} = \frac{0.05}{(1 + 0.05)^{15} - 1}$$

$$= \frac{0.05}{1.0789}$$

S = 0.04634

    = 9% rate of interest & 5% rate of redemption for capital.
      Rs.1/- per annum, 15 years. = 7.334

Capital cost = NAI * Y.P.   [NAI = Net Annual Income]

NAI = Capital cost/Y.P.= Rs.50,000/-/7.334 = Rs. 6818/-

= Rs.15000/--Rs.6818/-

= Rs.8182/-

Exercise 6

If Mr. A want to receive Rs.1000/- at the end of each year for next 5 years. Then how much amount Mr. A has to deposit in the bank, if the rate of interest is 7 % ?

Option A) Rs.5000/-, B) Rs.4500/-, C)Rs.4100/-, D) Rs.3800/-

Ans: $EAI = \dfrac{P * i * (1 + i)^n}{(1 + i)^n - 1}$

$1000 = \dfrac{P * 0.07 * (1+0.07)^5}{1+0.07)^5 - 1}$

P= Rs.4100/-

Exercise 7

Calculate with the help of weightage score system of comparison, fair market value of a flat on 31-3-2023, if two sale instance of flats are available. Details of flats area under.

Sale- A: 100 sq.m. area flat sold for Rs.10 lacks on 30 December 2022. It is 5 km distance from market and station. Road width is 20'. Building is 45 years old. Specification is poor.

Sale- B: 160 sq.m. area flat sold for Rs.37 lacks on 30th June 2023. It is 1.2 KM. distance from market and road width is 60'. It has good specification and 5 years old.

Subject flat: Area is 120 sq.m. It is at 2 km distance from market and abuts 30' wide road. It has excellent specification and has 20 years age.

Solution:

As usual, we must first of all make adjustment for time factor, Let us assume price rise in market rates is 6% per year. Adjustment rates of flats as on 31-3-2023 works out to (1/2% per months price rise is considered.)

Sale- A: 10,00,000/100 + 1.5/100 x 10,000 (1.5% price rise)= 10,150 sq.m.
Sale- B: 37,00,000/160-1.5/100x 23,125 (1.5% reduction)= Rs.22,778/-Per sq.m.

Weightage and levels for various factors are adopted as under.

Factors	Weightage %	Level 1	Level 2	Level 3	Level 4
Area/ Size	15	More than 150sq.m.	101 to 150sq.m.	76 to 100 sq.m.	75 & less sq.m.
Market	20	2km	1.5km	1.0km	0.5 & less km
Station	5	4km	3km	2km	1& less km
Road width	15	20'	40'	60'	80' & above
Age	20	50 yrs	30 yrs	15 yrs	5 & less yrs
Specification	30	Poor	Medium	Good	Excellent

Weightage score for 3 instances works out as under:

Property	Sale-A	Sale-B	Subject flat
	W x L= WS	W x L+WS	W x L+WS
Area	15 x 3= 45	15 x 1= 15	15 x 2= 30
Market	20 x1=20	20x3= 60	20 x 1=20
Station	5 x 1= 5	5 x 3= 15	5 x 3= 15
Road Width	15 x 1=15	15 x 3= 45	15 x 2=30
Age	20 x 1=20	20 x 4= 80	20 x 3=60
Specification	30 x 1= 30	30 x 3= 90	30 x 4= 120
Total Weightage			

Score (TWS)	135	305	275

Weightage Score:- (W.S) = W x L

Sale A	**Sale B**	**Subject Flat**
Total 135	305	275

Adjustment for time Factor

Sale A- $10,00,000/100 + \dfrac{1.5}{100} \times 10,000/\text{-}$

= Rs.10,150 Per Sq.mt

Sale B- $37,00,000/100 - \dfrac{1.5}{100} \times 23,125/\text{-}$ (1.5% reduction)

= Rs.22,778 Per Sq.mt

Weightage Score of Subject Property is Close to Weightage Score of Sale B.

Hence rate of Subject Property is to be based on the adjusted rate of sale B.

i.e. Rs.22778 Per sq.mt

305 ⎯⎯ 22778.

275   ?

$= \dfrac{275}{305} \times 22778$

= Rs.20,537/-

Say Rs. 20,500 Per Sq.mt

Fair Market Value of

Subject flat is = 120 X 20500

=Rs. 24,60,000/-

Exercise 8

Land leased for construction of Cinema House in a big city in 1991. The land was leased for 36 years. Land rent was Rs. 1,80,000/- per year. Lessee constructed Cinema House in 1995. Gross income from Cinema in 2020-2021 is Rs. 28,00,000/- maintenance charges Rs. 50,000/- per annum. Staff salary Rs. 45,000/- per month. Corporation property tax Rs. 30,000/- per 6 months. The condition on maturity of lease period is that Cinema House would vest with lessor. Useful life of Cinema House is 60 years.

Rate of capitalization is 12%. Redemption rate of capital 4% per annum. For present value capitalized rate is 8%.

Questions:
1) Calculate value of lessor's interest as right to lease rent income in 2020?

2) Calculate value of lessor's interest as right to Cinema income after 7 years due to reversion clause in 2020?

3) What will the total property value for lessor's interest in 2020?

4) Calculate the total value of property of lessee's interest in 2020?

5) Calculate the % of value share of lessor's interest in 2020?

Data: Lease start 1991
Cinema house constructed in 1995.
Lease period 36 years. Lease end year 2027.
Lease balance period 2027-2020= 7 years.
Cinema building life 1995+60 years = 2055
Cinema House Building Reversion year 2027 to 2055= 28 years.

1) Ans: Right to earn rent income for next 7 years. 2020-2027

Capital Value = Net rental Income x Y.P.   Y.P.= $[1- 1/(1+i)^n]/ i$

$= 180000 \times [1 - 1/(1+0.12)^7 /0.12]$ By investment method

$= 180000 \times 4.58$

$= Rs.824400/\text{-}$

2) Right to Cinema income after 7 years due to reversion clause. 2027 to 2055

   R=0.12, I =0.04, n=28

   Capital Value = Net rental Income x Y.P.   Y.P.= 1/ R + S

                                   Where, S = $i/(1+i)^n -1$

   S = $0.04/(1+0.04)^{28} -1 = 0.02$

   Y.P.= 1/ (0.12 +0.02) = 7.14

   Capital Value = Net rental Income x Y.P.

   = Rs. 2800000- RS.650000   [50000+540000+60000= Rs.650000]

   = Rs, 2150000 x 7.14

   = Rs. 15351000/-

   Present value = 15351000 x 0.116   Present value= $1/(1+0.08)^{28} = 0.116$

   = Rs.1780716/-

3) Ans:

   = Rs.8,24,400/- + Rs. 1780716/-

   = Rs.20,03,116/-

4) Ans:

   Net Income = Gross Income – Outgoings.

=Rs. 2800000- Rs.650000   [50000+540000+60000= Rs.650000]

= Rs.2150000/-

Capital Value = Net rental Income x Y.P.   Y.P.= $1/ R + S$

Where, $S = i/(1+i)^n -1$

$S = 0.04/(1+0.04)^7 -1 = 0.126$

Y.P.= $1/ (0.12 +0.126) = 4.06$

Capital Value = Net rental Income x Y.P.

= 2150000 x 4.06

= Rs.8729000/-

5)Ans:

= 2003116x 100 / 10732116   2003116 + 8729000=10732116

= 18.66 %

Exercise 9

Mr. X Purchased a residential plot of 2500 sq.ft. for Rs. 35,00,000/-, in the year 2016, He has constructed a residential building of GF for 1500 sq.ft. in the year 2018. And in 2024, he constructed 1st floor of 1000/- sq.ft. A valuation report is required. For the year 2024, replacement cost of GF is Rs.2500/- per sq.ft and FF is 2000/- per sq.ft.. Prevailing market rate in 2024 for plot is Rs.2000/-per sq.ft. and the guideline rate is Rs. 2500/- per sq.ft. Assume the life as 60 years and salvage value is 10%.

Questions:
1) What is the total replacement value of the building in year 2024?
2) What is the total depreciation value of the building by SLM in 2024?
3) What is prevailing market value of the plot in year 2024?
4) What is the total value of the entire property asset in year 2024?
5) What is the book value of the plot as on 2024?

Data

Plot Area	=	2500 sq.ft.
Purchased cost of plot (2016)	=	Rs. 35,00,000/-
Area of building GF (2018)	=	1500 sq.ft
Area of building FF (2024)	=	1000 sq.ft.
Replacement cost of building GF (2024)	=	Rs. 2,500/sq.ft.
Replacement cost of building FF (2024)	=	Rs. 2,000/sq.ft.
Prevailing market rate of plot	=	Rs. 2,000/sq.ft.
Guideline rate	=	Rs. 2,500/sq.ft.
Life of the building	=	60 years
Salvage value	=	10%

Calculations:-
   1) Ans: Replacement Value: Rs.57,50,000
Value of GF

Plinth up area of Ground Floor	=	1500 sq.ft
Replacement rate of GF	=	Rs. 2500/-

Replacement value 1500 x 2500	=	Rs. 37,50,000/-
Age 2018-2024	=	6 years
Life	=	60 years
Salvage value	=	10%
Depreciation percentage (6/60) x 90	=	9 %
Depreciation value of GF	=	0.09 x 37,50,000
		= Rs.3,37,500 /-
Depreciated value of GF	=	37,50,000 – 3,37,500/-
		= Rs. 34,12,500/-

Value of FF

Built up area of First Floor	=	1000 sq.ft.
Replacement rate of FF	=	Rs. 2,000/- sq.ft.
Replacement value 1,000 x 2,000	=	Rs. 20,00,000/-
Age 2018-24	=	6 years
Depreciation percentage (6/60) x 90	=	9%
Depreciation of GF is adopted (i.e. 9%)		
Depreciation value 0.90 x 20,00,000	=	Rs. 1,80,000/-
Depreciated value F.F. 20,00,000 – 1,80,000=		Rs. 18,20,000/-

Value of GF + FF

Total Replacement value 37,50,000 + 20,00,000 = Rs. 57,50,000/-

Total depreciated value 34,12,500/- + 18,20,000/-= Rs.52,32,500 /-

Value of plot

Extent of plot	=	2500 sq.ft.
Prevailing market rate	=	Rs. 2000/- sq.ft.
Value 2500 x 2000	=	Rs. 50,00,000/-

Total Value of property

Value of plot	=	Rs. 50,00,000/-
Value of building	=	Rs. 52,32,500/-
Total Value	=	Rs. 1,02,32,500/-

Book value

Book value of plot	=	Rs. 35,00,000/-

Exercise 10

Mr. X purchased a plot of 2000 sq.mt. in a big city in the year 2000 for a price of Rs. 60,00,000/-. In the year 2004, he constructed a hospital having 500 sq.mt built up floor area at ground level and 200 sq.mt. built up are at first floor level at the cost of Rs. 40,00,000/-. Prevalent replacement cost of similar hospital as on 2024 is Rs. 35,000 per sq.mt. Prevalent land price in the locality at present is Rs. 80,000 per sq.mt. The total life of the building is 60 years. scrap Value 10%

Questions:
1) What will be the depreciation amount of the hospital building by adopting straight line method?
2) What will be the depreciation amount of the hospital building by adopting Constant percentage method?
3) What will be the total market value of the plot at present?
4) What will be the total market value of the hospital property for bank loan purpose?
5) What is the balance economic life of the building?
6) Which of the following will not be considered for the estimation of present value of building?

   a)   Age   b)   Area of the building
   c)   Replacement cost   d)   Land rate

Data:-

Extent of plot	=	2000sq.mt.
Year of purchase of plot	=	2000
Purchased Amount	=	Rs. 60,00,000/-
Year of construction	=	2004
Plinth area of the building GF	=	500 sq.mt.
Built up area of the building FF	=	500 sq.mt.
Cost of building GF + FF (500 + 500)	=	Rs. 40,00,000/-
Replacement rate of building 2024	=	Rs. 35,000/- sq.mt.
Prevalent land rate	=	Rs. 80,000/- sq.mt.

Age of the building	=	20 years
Life of the building	=	60 years
Salvage value assumed	=	10%

Calculations:-

1.
Total built up area	=	1000 sq.mt.
Replacement rate	=	Rs. 35,000/-
Replacement value 1000 x 35,000	=	Rs. 3,50,00,000/-
Age	=	20 years
Life	=	60 years
Salvage value	=	10%
Depreciation percentage	=	20/60x90 = 30%
Depreciation Amount: 0.3x3,50,00,000=		Rs. 1,05,00,000/-

2.
Life	=	60 years
Rate of depreciation	=	100/60 = 1.66%
Depreciation amount	=	$P[1-(1-1.66/100)^{20}]$
	=	3,50,00,000[1-0.7155]
	=	3,50,00,000 x 0.2845
	=	Rs. 99,57,500/-

3.
Extent of plot	=	2,000 m2
Prevalent market rate	=	Rs. 80,000/- m2
Market value of land 2000x 80,000=		Rs. 16,00,00,000/-

4.
land value 2000x 80,000	=	Rs. 16,00,00,000/-
Depreciated value of the building	=	0.7 x 3,50,00,000/-
	=	Rs. 2,45,00,000/-
Total value Land + Building	=	Rs. 18,45,00,000/-

5.
Total economic life of building	=	60 years
Age of the building	=	20 years
Balance economic life: 60-20	=	40 years

6. While estimating the present market value of the building
   1. Age is to be considered
   2. Area is to be considered

3. Replacement cost is to be considered

Land rate need not be considered

Exercise 11

A business man purchased a plot of 1200 sq.mt is a posh locality of a city in the year 1998 for a price of Rs. 30,00,000/-. In the year 1999 he constructed a residential bungalow having 600 sq.mt. built up floor area at ground level and 200 sq.mt. built up are at first floor level at the cost of Rs. 60,00,000/-. Prevalent replacement cost of similar Bungalow as on 2021 is Rs. 30,000/- per sq.mt. Prevalent land price in the locality as on 2024 Rs. 60,000/- per sq.mt the total life of the building is 60 years. Considered scrap value 10%.

Questions:
1) What will be the depreciation amount of the bungalow by adopting straight line method of depreciation?
2) What will be the depreciation amount of the bungalow building by adopting Constant percentage method of depreciation?
3) What will be the total market value of the land at present?
4) What will be the total market value of the bungalow property for bank loan purpose?
5) What is the balance economic life of the building?
6) Which of the following will not be considered for the estimation of present market value of above property?
   a) Depreciation   b) Replacement cost
   c) Current Land rate   d) Economic obsolescence

Data:-

Extent of plot	=	1200sq.mt.
Year of purchase of plot	=	1995
Purchased Amount	=	Rs. 30,00,000/-
Year of construction	=	1996
Plinth area of the building GF	=	600 sq.mt.
Built up area of the building FF	=	200 sq.mt.

Cost of building GF + FF (600 + 200)	=	Rs. 60,00,000/-
Replacement rate of building 2024	=	Rs. 30,000/- sq.mt.
Prevalent land rate	=	Rs. 60,000/- sq.mt.
Age of the building 1999 - 2024	=	25years
Life of the building	=	60 years
Salvage value assumed	=	10%

Calculations:-

1.
Total built up area	=	800 sq.mt.
Replacement rate/sq.mt.	=	Rs. 30,000/-
Replacement value 800 x 30,000	=	Rs. 2,40,00,000/-
Age	=	25 years
Life	=	60 years
Salvage value	=	10%
Depreciation percentage	=	25/60x90 = 37.50%
Depreciation Amount: 0.375x2,40,00,000= Rs. 90,00,000/-		

2.
Life	=	60 years
Rate of depreciation	=	100/60 = 1.66%
Depreciation amount	=	$P[1-(1-1.66/100)^{25}]$
	=	2,40,00,000[1-0.658]
	=	2,40,00,000 x 0.342
	=	Rs. 82,08,000/-

3.
Extent of plot	=	1,200 m2
Prevalent market rate	=	Rs. 60,000/-per m2
Market value of land 1200x 60,000=		Rs. 7,20,00,000/-

4.
land value 1200x 60,000	=	Rs. 7,20,00,000/-
Depreciation value of the building	=	0.375 x 2,40,00,000
(SLM)	=	Rs. 90,00,000/-
Total value Land + Building	=	7,20,00,000 + 1,50,00,000/-
	=	Rs. 8,70,00,000/-

5.
Economic life of building	=	60 years
Age of the building	=	25 years

Balance economic life: 60-25   =   35 years

6.   Economic obsolescence need not be considered.

Exercise 12

          A building with 6 floors each floor contains 300 sq.mt built up area. Ground, 1st and 2nd floors are occupied by tenants. There are 4 tenants per floor each occupied 75 sq.mt built up in each floor. Each tenants charges Rs. 5000/- month rent. Property tax Rs. 50,000/- per 6 months. N.A. tax is Rs. 1000/- per year. Insurance Rs. 12,000/- year. Repair charges 5% of gross rental income. Management charges 3% of gross rental income. Stamp duty charges Rs. 20000/-. Upper 3 floors are owner occupied. Rental capitalization rate is 8% for tenant occupied portion. Land area 1800 sq.mt. FAR is 1.00. Flat rate is Rs. 30000/- per sq.mt. Building is newly constructed.

Questions:
1)   What is net rental income from tenant occupied part?
2)   What is the value of owner occupied portion of building?
3)   What is the value of tenant occupied portion of building?
4)   Which method is applied for valuation?
5)   What is the total value of building?
6)   What is the balance potential for owner?

Tenant Occupied

        3 Floors (GF, FF, SF) = 3 x 300 = 900 sq.mt.
        Gross rent = 3 x 4 x Rs.5000 = Rs. 60,000/- x 12 = Rs. 7,20,000/-
        Gross Income Rs. 7,20,000/- per annum.

	Total	Tenanted portion
1) Out going Rs.50000 x 2	= 1,00,000/-	= Rs. 50,000/-
2) NA Tax Rs.1000	= 1,000/-	= Rs. 500/-
3) 5% x Rs.7,20,000/-	= 36,000/-	= Rs.18,000/-
4) 3% x 7,20,000/-	= 21,600/-	= Rs. 10,800/-/-

5) Insurance   = 12,000/-   = Rs. 6,000/-

   Total   =   = Rs. 85,300/-

1) Ans:Net annual rental income = Rs.6,34,700/-

2) Ans:

Owner occupied portion value.= 900 x 30000

$$= Rs. \; 2,70,00,000/-$$

3)

Capital value = Net annual income x Y.P.

$$= Rs.6,34,700/- \; x \; 12.50$$

$$= RS. \; 79,33,750/-$$

4) Ans: Rental capitalization method for tenant occupied portion and market approach for owner occupied portion.

5) Ans: Total building value= Rs.3,49,33,750/-

6) Ans: Nil.

Exercise 13

In a plot of 6320 sq.ft., the landlord Mr. Z intends to construct an apartment building through joint venture for a built up area of 12640 sq.ft. There will be 16 flats of built up area of 790 sq.ft. The prevailing market rate for plot is Rs. 10,000/- per sq.ft. and the guideline rate is Rs. 18,000/- per sq.ft. The building construction rate is Rs. 2,500/- per sq.ft.. Assume the promoters profit as 20%.

Questions:

1) What is FSI?
2) What is the undivided share (UDS) for each flat?
3) What is the composite rate?
4) What is the selling price of each flat?
5) What is joint venture Ratio? (Promoter: Landlord)
6) Whether there is any impact of guideline rate while fixing the composite rate and venture ratio?

Data:-

Extent of plot	=	6320 sq.ft.
Proposed built up area	=	12640 sq.ft.
No. of flats proposed	=	16
Built up area of each flat	=	790 sq.ft.
Market rate of plot	=	Rs. 10,000/- sq.ft.
Guideline rate	=	Rs. 18,000/- sq.ft.
Building construction rate	=	Rs. 2,500/- sq.ft.
Promoters profit	=	20%

Calculations:-

1.	Total built up area	=	12640 sq.ft.
	Extent of plot	=	6320 sq.ft.

	FSI 12640/6320	=	2

2.
	Built up area of one flat	=	790 sq.ft.
	FSI	=	2
	UDS of a flat 790/2	=	395 sq.ft.

3.
	Land Component 10000/2	=	Rs. 5,000/-
	Building rate	=	Rs. 2,500/-
	Land + Building rate	=	Rs. 7,500/-
	Add 20% for promoters profit	=	Rs. 1,500/-
	Composite rate	=	Rs. 9,000/- sq.ft

4.
	Built up area of one flat	=	790 sq.ft.
	Composite rate	=	Rs. 9,000/- sq.ft
	Selling price 790 x 9000	=	Rs. 71,10,000/-

5.
	Landlord's share 10000/2	=	Rs. 5,000/-
	Promoter's share	=	Rs. 2,500/-
	Total - Landlord + Promoter	=	Rs. 7,500/-
	Landlord's percentage share	=	5000/7500 = 67%
	Promoter's percentage share	=	2500/7500 = 33%
	Joint venture ratio is	=	33:67

6. Guideline rate is meant for fixing stamp duty only and hence plays no role while fixing the composite rate and Joint venture ratio.

Exercise 14

On 04/01/2004, a property was acquired by Mr. X for Rs. 9,08,000/- . In August 2010, improvements were made for Rs. 12,06,000/- on 20/08/2020. The property was sold to Rs. 93,00,000/-. 109, 167, 301 are the cost inflation index for 2003-04, 2010-11, 2020-21 respectively.

Questions:

1) What is the indexed cost of acquisition?
2) What is the indexed cost of improvement?
3) What is the total indexed cost of acquisition & improvement?
4) What is the taxable capital gain?
5) What is the tax to be paid by Mr. 'X'?
6) If the property is owned by a company, what is the capital gain tax?

Calculations:

Date of acquisition	=	04/01/2004 (2003-2004)
Cost of acquisition (01/2004)	=	Rs. 9,08,000/-
Cost of improvements (8/2010)	=	Rs. 12,06,000/- (2010-11)
Date of transfer	=	20/08/2020 (2020-21)
Sale consideration	=	Rs. 93,00,000/-
Cost of inflation index 2003-04	=	109
Cost of inflation index 2010-11	=	167
Cost of inflation index 2020-21	=	301

1. Indexed cost of acquisition = 9,08,000 x (301/109)
   = Rs. 25,07,413/-

2. Indexed cost of improvement = 12,06,000 x (301/167)
   = Rs. 21,73,689/-

3. Total indexed cost of acquisition & indexed cost of improvement = 25,07,413 + 21,73,689
   = Rs. 46,81,102/-

4. Taxable capital gain = 93,00,000 – 46,81,101
= Rs. 46,18,900/-

5. Tax in the hand of Mr. 'X' – 20% = 0.20 x 46,18,900
= Rs. 9,23,780/-

6. If it is owned by a company tax - 40% = 0.40 x 46,18,900
= Rs.18,47,560/-