DEPRECIATION

Depreciation means decrease in the value of assets because of usage or passage of time or obsolescence or accident. In other words, depreciation is the allocation of the depreciable amount of an asset over its estimated useful life.

Deprecation is charged on the fixed assets and not on the current assets.

It is charged on the book value of the assets and the market value of the assets is irrelevant.

Depreciation is charged on a permanent and continuous basis.

Depreciation is not charged on land.

Causes of depreciation:

The following are the main causes of depreciation

1. Physical deterioration – wear and tear
2. Time factors /efflux of time – certain assets which has life of certain years only such as lease, patent and copy rights etc.
3. Depletion – some assets which become dry after certain years of usage such as mines, natural gas, etc.
4. Obsolescence – some assets which become scrapped even though it is in good condition, when better machine comes into market.

Accident- machines value will be decreased due to accident.

Depreciation, depletion, amortization and dilapidations

Depreciation – fixed assets
Depletion – wasting assets
Amortization – intangible assets
Dilapidations – damage to the building or other property during tenancy.

Depreciation accounting:

It is a system of accounting which aims to distribute the cost of assets less salvage value(if any) over the estimated useful life of the assets in a systematic manner. It is a process of allocation and not valuation.

Need for providing depreciation:

To know the true profit.

To know the true financial position.

To show the assets at is proper value

To retain fund for replacement of the assets, out of profit.

Methods of recording depreciation:

The depreciation amount may be recorded in the books in two different ways. 1. When provision for depreciation is maintained and 2. Not maintained.

Provision is not maintained	**Provision for depreciation is maintained**
Depreciation A/c. Dr. To Concerned Assets A/c.	Depreciation A/c. Dr. To Provision for depreciation A/c.
Profit and loss Account A/c. Dr. To Depreciation A/c.	Profit and loss Account A/c. Dr. To Depreciation A/c.
Bank A/c. Dr. Depreciation A/c. Dr. To Assets A/c. (When the assets are sold)	Bank A/c. Dr. Provision for depreciation A/c. Dr. To Assets A/c. (When the assets are sold)
Under this method, in balance sheet assets will be shown after deducting depreciation	Under this method, in balance sheet assets will be shown in the original price and the provision created will be shown on the liabilities side.

Methods of computing depreciation

The following are the different methods of computing depreciation

1. Straight line method.

It is otherwise called as fixed installment, fixed percentage or original cost method. Here depreciation is computed with the help of a formula

$$\text{Depreciation} = \frac{\text{cost of the asset} - \text{scrap value}}{\text{Estimated life of the assets}}$$

2. Written down value method.

It is otherwise called as diminishing balance method or reducing installment method. Here depreciation is calculated at a certain percentage each year on the balance of the asset which is brought forward from the previous year.

Rate of depreciation can be determined on the basis of cost, scrap and life of the assets

$$R = 1 - S/C \times 100$$

3. Sum of digits method

Under this method depreciation is computed as under:

$$\text{Depreciation} = \frac{\text{No of year remaining including the current year}}{\text{Total of all digits of the life of the years (in years)}} \times \text{cost of the asset}$$

Cost of the asset = original cost – scrap value

4. Annuity method

Under this method, the amount spent on the purchase of an asset is considered as an investment which is assumed to earn interest at certain rate. Every year the asset is debited with interest and credited with depreciation. Every year interest is computed on the opening value of the asset.

5. Depreciation fund method/sinking fund method:

In all the methods discussed above, when the life of the assets expires, we might not have enough money in hand to purchase new assets as the amount of depreciation charged in the profit and loss account is not taken out from business and indeed it is rotated in the business itself.

To overcome this problem and arrange funds for purchasing new assets, the depreciation fund method is introduced. Under this method, the amount of depreciation charged every year is taken out from the business and invested outside in readily saleable securities or some other mode. When the life of the asset expires, the investment is sold out and funds are moblised to purchase new asset.

Journal entries to be passed under the depreciation fund method

First year – depreciation provided Depreciation A/c. Dr. To Depreciation fund A/c.	**Subsequent years** For receiving interest on investment Bank A/c. Dr. To Depreciation Fund A/c.
For investing the amount Depreciation fund Investment A/c. Dr. To Bank A/c.	depreciation provided Depreciation A/c. Dr. To Depreciation fund A/c.

For transferring to profit and loss A/c. Profit and loss A/c. Dr. To Depreciation A/c.	For investing the amount (including interest) Depreciation fund Investment A/c. Dr. To Bank A/c.
	For transferring to profit and loss A/c. Profit and loss A/c. Dr. To Depreciation A/c.

Last year For receiving interest on investment Bank A/c. Dr. To Depreciation Fund A/c.	For sale of investment Bank A/c. Dr. To Depreciation fund investment A/c.
For investing the amount Depreciation fund Investment A/c. Dr. To Bank A/c.	For profit on sale of investment Depreciation fund Investment A/c. Dr. To Depreciation Fund A/c.
For transferring to profit and loss A/c. Profit and loss A/c. Dr. To Depreciation A/c.	For writing off old asset Depreciation fund A/c. Dr. To Asset A/c.
For transferring the depreciation fund Depreciation fund A/c. Dr. To Profit and loss A/c.	For purchasing new assets New Asset A/c. Dr. To Bank A/c.

6. Insurance policy method

This is similar to the depreciation fund method. Here instead of investing the amount of depreciation in saleable securities it is investment by taking insurance policy. However, premium will be paid in the beginning of the year.

7. Revaluation method

Under this method, the assets are revalued at the end of the accounting year and this value is compared with the value of the asset at the beginning of the year, the difference is treated as depreciation. This method is used in case of bottles, corks, loose tools, packages, live stock etc.

8. Depletion method

This method is mostly used in case of wasting assets such as mines, quarries, etc. In case of mines, the value depends on the quantity of minerals that can be obtained and when the entire quantity is taken, the value may become nil. Therefore, here the depreciation is computed simply dividing the cost of the mine by the total quantity of minerals expected to be available.

$$\text{Rate of Depreciation} = \frac{\text{cost of mine}}{\text{Estimated quantity to be raised}}$$

9. Machine hour rate method

It is used in case of machines. The life of the machines is based the total hours for which it will run. Hourly rate of depreciation is computed by dividing the cost of the machine by the total number of hours for which the machine is expected to be used.

$$\text{Machine hour rate} = \frac{\text{Cost of the machine}}{\text{Estimated total hours of life}}$$

Change of method :

If the management desires, it can change of method of depreciation. It may be changed from the current year or with retrospective effect. If it is from current then there would be any problem. However, when it is decided to change from the past years, then from the beginning of the year, depreciation is computed using both the method, and if there is any difference it will adjusted in the current year profit and loss account.

1. Depreciation arises because of

A] fall in the market value of asset	B] fall in the value of money	C] fall in the reputation of the business	D] physical wear and tear.

2. The amount of depreciation charged on a machinery will be debited to

A] Machinery A/c.	B] depreciation A/c.	C] Consolidated assets account	D] not to be debited

3. Yaspal and co. purchased a machine for Rs.1,00,000. Estimated useful life and scrap value were 10 years and Rs.12000/- respectively. The machine was put to use on 01/01/2000. Find out the amount of depreciation for the year 2005 using sum of years digits method.

A] Rs.16000	B] Rs. 9600	C] Rs.8000	D] Rs.6400

4. Depreciation is a process of:

A] valuation	B] allocation	C] both and b	D] none

5. Under the straight line method of charging depreciation, it:

A] increase every year	B] decrease every year	C] constant every year	D] none

6. Under the diminishing balance method, the depreciation is calculated on:

A] original cost	B] written down value	C] the scrap value	D] none

7. Depreciation on diminishing balance method of Rs.20,000 at the rate of 10% p.a after three years will be:

A] 14580	B] 14000	C] 5420	D] none

8. Process of becoming out of date or obsolete is termed as

A] obsolescence	B] depletion	C] amortization	D] deterioration

9. On January 2, 2000, Castle Company sold a machine for Rs.15,000 that it had used for several years. The machine cost Rs.43,000, and had accumulated depreciation of Rs.18,000 at the time of sale. What gain or loss will be reported on the income statement for the sale of the machine?

A] gain of Rs.10000	B] Loss of Rs.3000	C] loss of Rs.10000	D] gain of Rs.3000

10.MRF purchased equipment at the beginning of 2010 for Rs.70,000. MRF decided to depreciate the equipment over a 4-year period using the straight-line method. MRF estimated its salvage value at 10,000. Which of the following statements is correct concerning MRF's financial statements at December 31, 2010?

A] Rs.60000	B] Rs.55000	C] Rs.25000	D] 14000

11] When a change in the method of depreciation is effected the deficiency or surplus arising from retrospective re-computation of depreciation in accordance with the new method is

A] to be ignored	B] to be charged or credited to capital reserve	C] to be spread over the remaining period	D] to be adjusted in the accounts in the year change is effected

12. Assets purchased at Rs.10000. Installation charges are Rs.2000. Estimated scrap value at the end of its useful life of five years Rs.1000. Depreciation amount under straight line method will be

A] Rs.2000	B] Rs.2400	C] Rs.2200	D] 2600

13. For providing depreciation on leasehold property, the appropriate method of depreciation is

A] replacement method	B] revaluation method	C] fixed installment method	Reducing installment method

14. A change in the method of depreciation is made only

A] if the adoption of new method is required by statue	B] for compliance with an accounting standard	C] if the change would result in better presentation of financial statements	D] all of the above

15. Depreciation is normally charged on

A] original cost	B] replacement cost	C] fair market value	D] present cost

16. Assets purchased at Rs.100000/- on 01/01/09. Charged depreciation@ 20% on diminishing balance method. Life of the assets is 6 years. Estimated scrape value at the end of its useful life of five years Rs.1000. Assets sold on 01/07/2000 for a sum of Rs.80000. What will be the profit on sale of assets

A] Rs.6000	B] Rs.8000	C] Rs.7500	D] 8100

17] Accounting standard applicable to depreciation accounting is

A] AS 9	B] AS 6	C] AS 1	D] AS 16

18. In which of the following method, depreciation is charged by allocating depreciable cost in production of the annual output to the probable life time output

A] working hour	B] production unit	C] revaluation	D] straight line

19.Assets purchased at Rs.20000 on 01/07/1997. Charge depreciation @ 10% on straight line method on 31st December ever year. From 01/01/1999 the company decided to change the method of depreciation to diminishing balance method @ 15% p.a. on 01/07/2000, the assets were sold for Rs. 13000/-. What will be loss on sale of assets

A] Rs.360	B] Rs.366	C] Rs.350	D] 356

20. What will be depreciation rate under straight line method, if assets purchased for Rs.110000/- and zero scrap value at the end of useful life of five years

A] 20%	B] 25%	C] 22%	D] 18%

21. Depreciation is not charged on

A] machinery	B] freehold land	C] goodwill	D] furniture

22. Depreciation should be provided on

A] all current assets	B] fixed assets	C] deferred revenue assets	D] all of the above

23. A firm purchased a vehicle for Rs.500000/- on 01/04/2009. It charged depreciation @ 10% following WV method. The vehicle was sold for Rs.400000/- on 30/03/2011. The result of the transactions shall be

A] profit 5000	B] loss 5000	C] loss 50000	D] no profit no loss

24] Which method of accounting for depreciation makes available a sum of money for the replacement of assets at the end of useful life of assets?

A] Straight line	B] written down value	C] sinking fund	D] depletion

25] In case of wasting assets like mines which method of depreciation is used

A] Straight line	B] written down value	C] sum of digits	D] none

26] Depreciation is provided, with a view to

A] show correct profit	B] make provision of replacement of assets	C] provide for diminishing in value of assets	D] all of the above

27] In determining depreciation by straight line method, factors to be considered are

A] life of asset	B] salvage value	C] cost of asset	D] all of above

28] Realistic company purchased a new truck on January 1 2001. The truck cost 20000 has a four year life and Rs.4000 residual value. The company has a December 31 year end. If realistic company depreciates the truck by straight line method, how much should realistic report as the book value of the truck at the end of 2003

A] Rs.12000	B] Rs.4000	C] Rs.8000	D] 16000

29] Which method of depreciation also considers interest on capital invested in asset

A] Straight line	B] written down value	C] machine hour	D] none

30] An asset costs Rs.10000 and has a life of five years and a residual value of Rs.1000. Which one of the following statement reflects the accounting process correctly?

A] Vehicles is debited with Rs.1800 and depreciation credited with Rs.1800	B] Vehicle is debited with Rs.2000 and Depreciation is credited with Rs.2000	C] Vehicle is credited with Rs.1800 and Depreciation is debited with Rs.1800	D] None

31] Depreciation is measure of exhaustion of effective life of a

A] all current assets	B] fixed assets	C] Capital	D] all of the above

32] Correct accounting entry for making provision of depreciation

A] Assets A/c. To Capital A/c.	B] Depreciation A/c. To Assets A/c.	C] Assets A/c. To Depreciation	D] None

33] Mr. A Purchased a piece of land of Rs.1200000/-. Annual depreciation to be provided shall be

A] Rs.120000	B] Rs.10000	C] Rs.100000	D} nil

34] If depreciation is not provided, it will result in reporting

A] losses being more than actual	B] losses less than actual	C] losses and value of assets both less than actual	D] profits and value of assets both more than actual

35] Written down method of providing depreciation is considered to be better method because

A] Depreciation is provided equally for every year so here is no complex calculation to be made.
B] In earlier years, less depreciation is provided so that higher profits could be reported
C] As the assets gets older, effectiveness of an assets reduces requiring higher wear and tear and repair expense, so the charges for depreciation should decrease in later years accordingly
D] all of the above

1] On 1st January 2001, machinery was purchased for Rs.50000. On 1st july 2002 additions were made to the extent of Rs.10000. On 1st April 1193 further addition were made to the extent of Rs. 6400/-. Show machinery account from 2001 to 2003 if depreciation is charged at 10% p.a. by following original cost method and diminishing balance method.

Machinery Account

		Oringin al cost	Diminis hing			Oringinal cost	Dimini shing
01-01-01	To Bank A/c.	50000	50000	31-12-01	By Depreciation A/c.	5000	5000
				31-12-01	By Balance C/d	45000	45000
		50000	50000			50000	50000

01-01-02	To Balance b/d	45000	45000	31-12-02	By Depreciation A/c.	5500	5000
01-07-02	To Bank A/c.	10000	10000	31-12-02	By Balance C/d	49500	50000
		55000	55000			55000	55000

01-01-02	To Balance B/d.	49500	50000	31-12-03	By Depreciation A/c.	6480	5480
01-04-03	To Bank A/c.	6400	6400	31-12-03	By Balance c/d.	49420	50920
		55900	56400			55900	56400

2] A Company purchased a 3 years lease on January 1,2002 for Rs.25000. It is decided to provide for the replacement of lease at the end of the 3 years by setting up a depreciation fund. It is expected that the investment will fetch interest at 5%. Sinking fund table show that to provide the requisite sum at 5% at the end of 3 years an investment of Rs.7932 is required every year. Investment made to the nearest rupee. On 31st December 2004, the investment were sold for Rs.15250/-. On 1st January 2005, the same lease was renewed for a further period of 3 years by payment of Rs.30000/-. Show necessary accounts.

LEASE ACCOUNT

01-01-02	To Bank	25000	31-12-02	By Balance c/d.	25000
		25000			25000
01-01-03	To Balance c/d	25000	31-12-03	By Balance b/d.	25000
		25000			25000
01-01-04	To Balance b/d	25000	31-12-04	By Depreciation fund	25000

DEPRECIATION FUND ACCOUNT

31-12-02	To Balance c/d.	7932	01-01-02	By Depreciation A/c.	7932
		7932			7932
31-12-03	To Balance c/d	16261	01-01-03	By Balance b/d.	7932
			31-12-03	By bank	397
				By Depreciation A/c	7932
		16261			16261
31-12-04	To Depreciation fund investment	1011	01-01-04	By Balance c/d.	16261
	To lease	25000		By Bank	813
			31-12-04	By Depreciation	7932
				By Profit and loss	1005
		26011			26011

DEPRECIATION FUND INVESTMENT ACCOUNT

31-12-02	To Bank.	7932	31-12-02	By Balance c/d	7932
		7932			7932
01-01-03	To Balance b/d	7932	31-12-03	By Balance c/d.	7932
31-12-03	To Bank	8329			
		16261			16261
01-01-04	To Balance b/d	16261	31-12-04	By Bank	15250
			31-12-04	By Depreciation fund	1011
		16261			16261

3] A mine was acquired at a cost of Rs.20,00,000 on 1st July 2002, it was expected that it would yield 200000 tons of minerals in all. The actual output was

2002 – 10000 tons, 2003 40000 tons and 2004 – 32000 tons. Write up the mine account for the above years using depletion method of charging depreciation.

MINES ACCOUNT

01-07-02	To Bank A/c.	2000000	31-12-02	By Depreciation A/c.	100000
				By Balance C/d	1900000
		2000000			2000000

2000000 / 200000 X 10000 = 100000

01-01-03	To Balance B/d	1900000	31-12-03	By Depreciation A/c.	400000
				By Balance C/d	1500000
		1900000			1900000

2000000 / 200000 X 40000 = 100000

01-01-04	To Balance b/d	1500000	31-12-04	By Depreciation A/c.	320000
				By Balance C/d.	1180000
		1500000			1500000

2000000 / 200000 X 32000 = 320000

4] A machine was acquired on 1st April 2003 at a cost of Rs.90000/- the cost of installation being Rs.10000. it is expected that its total life will be 20000 hours. During the year it worked for 5000 hours, and during 2004 for 8000 hours. Write up machinery account for 2003 and 2004.

MACHINES ACCOUNT

01-04-03	To Bank A/c.	100000	31-12-03	By Depreciation A/c.	25000
				By Balance C/d	75000
		100000			100000

01-01-04	To Balance B/d	75000	31-12-04	By Depreciation A/c.	40000
				By Balance C/d	35000
		750000			75000

100000/20000 X 5000 = 25000

100000/20000 X 8000 = 40000

5] M/s. sahani enterprises acquired a printing machine for Rs.40000/- on July 1, 2001 and spent Rs.5000/- on its transport and installation. Another machine for Rs.35000/- was purchased on Jan. 01, 2003.Depreciation is charged at the rate of 20% on written down value. Calculate written value as on 31/03/2004.

MACHINERY ACCOUNT

01-07-01	To Bank A/c.	45000	31-03-02	By Depreciation A/c.	6750
				By Balance C/d	38250
		45000			45000

45000 X20/100 X 6/12 = 6750

01-04-02	To Balance B/d	38250	31-03-03	By Depreciation A/c.	9400
01-01-03	To Bank A/c.	35000		By Balance C/d	63850
		73250			73250

38250 X 20/100 =7650 + 35000 X 20/100 X3/12 =1750

01-04-03	To Balance b/d	63850	31-03-04	By Depreciation A/c.	12770
				By Balance C/d.	51080
		63850			63850

63850 X 20/100 =12770

ANSWERS

1] d	2] b	3] b	4] b	5] b	6] b	7] a	8] a	9] c	10] c
11] d	12] c	13] b	14] c	15] a	16] b	17] b	18] b	19] b	20] a
21] b	22] b	23] b	24] c	25] d	26] d	27] d	28] c	29] d	30] c
31] b	32] b	33] d	34] d	35] c					