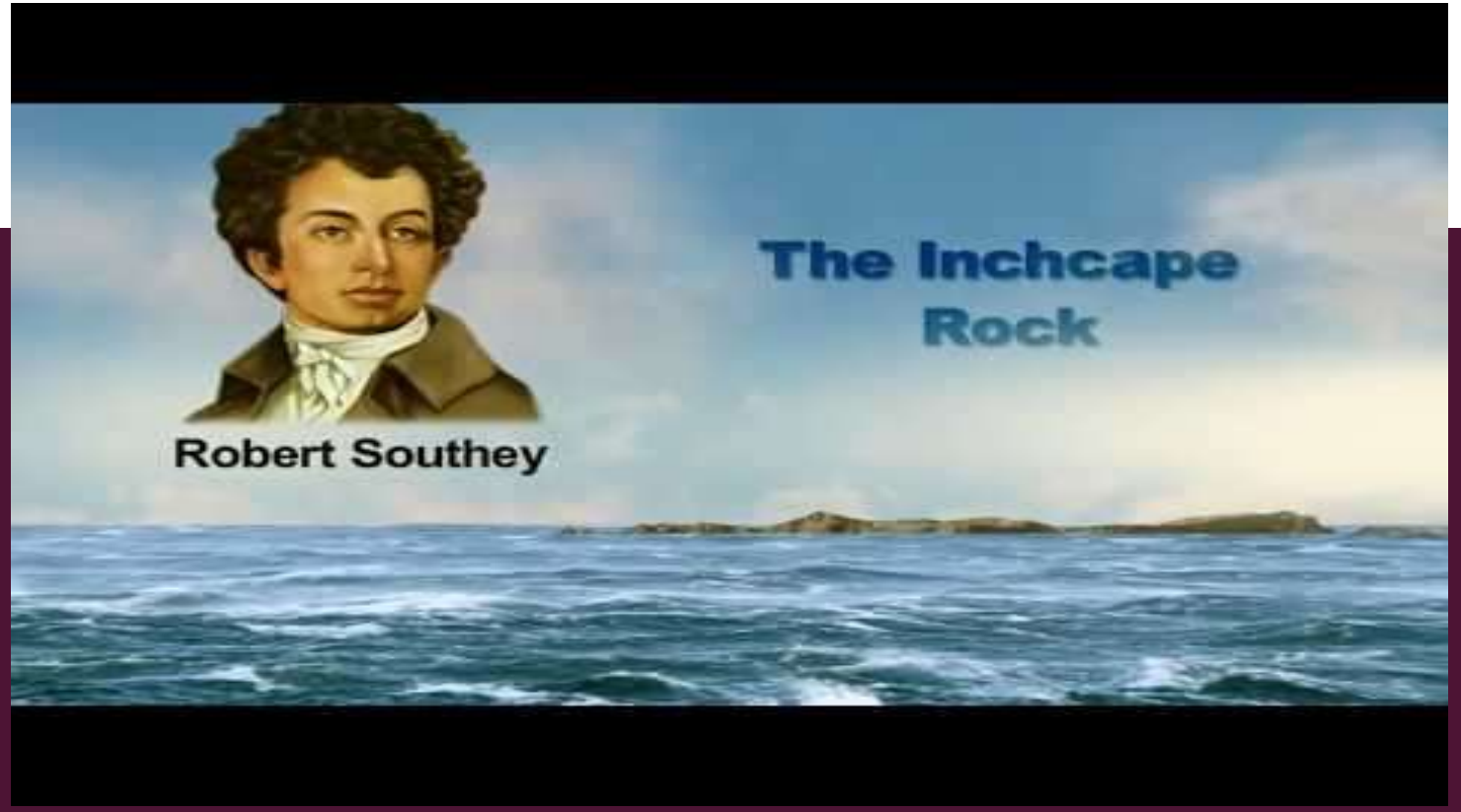
ENGLISH

2.3 THE INCHCAPE ROCK



Robert Southey (1774 to 1843) He was born in Bristol, England. He was the son of a draper, educated at Westminster School and Balliol College, Oxford.

He was a Poet Laureate of England from 1813 to 1843. Some of his short poems like 'The Scholar'. 'The Battle of Blenheim', 'Bishop Hatto', 'The Inchcape Rock' etc. are very popular with the school children.

POEM INTRODUCTION

The Inchcape Rock' is a ballad. It's the story of the 14th century attempt by the Abbot of Aberbrothok to install a warning bell on Inchcape, a notorious sandstone reef about 11 miles (18km) off the east coast of Angus, Scotland, near Dundee and Fife, occupied by the Bell Rock Lighthouse.

Southey was inspired by the the legendary story of a pirate who removed the bell on the Inchcape Rock placed by the Abbot of Aberbrothok. The poem gives us a message that those who do wrong things will meet with due punishment.

THE INCHCAPE ROCK

No stir in the air, no stir in the sea,
The ship was as still as she could be,
Her sails from heaven received no motion,
Her keel was steady in the ocean.

Without either sign or sound of their shock
The waves flow'd over the Inchcape Rock;
So little they rose, so little they fell,
They did not move the Inchcape Bell.

The Abbot of Aberbrothok
Had placed that bell on the Inchcape Rock;
On a buoy in the storm it floated and swung,
And over the waves its warning rung.

When the Rock was hid by the surge's swell,
The mariners heard the warning bell;
And then they knew the perilous Rock,
And blest the Abbot of Aberbrothok.

The Sun in heaven was shining gay,
All things were joyful on that day;
The sea-birds scream'd as they wheel'd round,
And there was joyance in their sound.

The buoy of the Inchcape Bell was seen
A darker speck on the ocean green;
Sir Ralph the Rover, walk'd his deck,
And he fix'd his eye on the darker speck.

He felt the cheering power of spring,
It made him whistle, it made him sing;
His heart was mirthful to excess,
But the Rover's mirth was wickedness.

His eye was on the Inchcape float;
Quoth he, "My men, put out the boat,
And row me to the Inchcape Rock,
And I'll plague the Abbot of Aberbrothok'.

The boat is lower'd, the boatmen row,
And to the Inchcape Rock they go;
Sir Ralph bent over from the boat,
And he cut the Bell from the Inchcape float.

Down sunk the bell with a gurgling sound.
The bubbles rose and burst around;
Quoth Sir Ralph, 'The next who comes to the Rock
Won't bless the Abbot of Aberbrothok.'

Sir Ralph the Rover, sail'd away,
He scour'd the seas for many a day;
And now grown rich with plunder'd store,
He steers his course for Scotland's shore.

So thick a haze o'erspreads the sky,
They cannot see the Sun on high;
The wind hath blown a gale all day,
At evening it hath died away.

On the deck the Rover takes his stand,
So dark it is they see no land.
Quoth Sir Ralph, 'It will be lighter soon,
For there is the dawn of the rising Moon.'

'Canst hear', said one, 'the breakers roar?
For methinks we should be near the shore'.
'Now where we are I cannot tell,
But I wish I could hear the Inchcape Bell'.

They hear no sound, the swell is strong;
Though the wind hath fallen they drift along,
Till the vessel strikes with a shivering shock,-
'O Christ! it is the Inchcape Rock!'

Sir Ralph the Rover tore his hair;
He curst himself in his despair;
The waves rush in every side,
The ship is sinking beneath the tide.

But even in his dying fear
One dreadful sound could the Rover hear,
A sound as if with the Inchcape Bell,
The Devil below was ringing his knell.

-Robert South

Summary of the poem "The Inchape Rock"

The poem deals with the story of the Inchcape Bell. It was anchored by the Abbot of Aberbrothok to a buoy atop Inchcape Rock. On mild days, like the one on which the poetic story begins, the waves might wash over the Inchcape Rock but they would not stir the buoy nor the Inchcape Bell.

Therefore, the seas were calm and the ship captains, sailors and townspeople needed no warnings of rough seas, which was the function of the Inchcape bell--to give warning of rough and dangerous seas. Anchored offshore was the plundering ship of Captain Sir Ralph the Rover who was in a boisterous, springlike mood and conceived a mischievous and wicked plan. His sailors rowed him to Inchcape Rock and he cut the Inchcape Bell from its fastening to the buoy (which he called a Float). Sir Ralph watched the bell sink amidst bubbles while thinking of the wicked jest he had played against the memory of the Abbot of Aberbrothok.

Sir Ralph went to sea to plunder merchant ships. When he had gained a full cargo of riches, he returned to Scotland's shores and Inchcape Rock. The skies on that day were dark and overspread with storm threatening clouds. The gale force wind of the daylight hours had died away at night and no sight was to be seen in the black stillness.

The rising moon gave Sir Ralph the Rover occasion to say that there would soon be light enough to see the land by. But the sailors replied that they wished they knew how near to the rocks they were because they could hear the breakers crashing on the rocks--and they sorely wished they could also hear the Inchcape Bell. A jolt rocked the ship. They had struck the Inchcape Rock. As the ship is torn apart by the storming waves, Captain Ralph the Rover curses his wickedness and, as he faces his dying breaths, hears the Inchcape Bell rung from beneath the waves by the Devil's hand to toll Ralph the Rover's death knell.

Figures of Speech - (Stanza 01 to 04)

1) No stir in the air, no stir in the sea
Repetition- The word 'no stir' is repeated.
Alliteration - The sound of letters 'n' & 's' are repeated.

2) The ship was still as she could be
Personification - The ship is personified.
Alliteration - The sound of letter ’sh’ is repeated.

3) Her sails from heaven received no motion
Alliteration- The sound of letter 'h' is repeated.
Personification - The ship is personified.
Inversion - The word order is changed. The correct order- Her sails received no motion from heaven.

4) Her keel was steady in the ocean.
Personification- The ship is personified.

5) So little they rose, so little they fell,
Repetition- The word ‘little' is repeated.
Antithesis - Opposite words (rose and fell) are used.
Anti-climax -The words are arranged in descending order.
Personification - The waves are personified.

6) On a buoy in the storm it floated and swung
Inversion - The word order is changed.
It floated and swung on a buoy in the storm.
Alliteration - The sound of letter 's' is repeated.

7) And over the waves its warning rung.
Alliteration - The sound 'w' is repeated.
Personification - The waves are personified.

8) When the Rock was hid by the surge’s swell
Alliteration –The sound of letter 's' is repeated.
Personification - The rock is personified.

With the help of the following points, write a poetic appreciation of the poem 'The Inchcape Rock'.

(4 marks)

- **About the poem / poet and the title**
- **The theme**
- **Poetic style**
- **The language/ poetic devices used in the Poem.**
- **Special features**
- **Message, values, morals in the poem**
- **Your opinion about the poem**

- Poem 'The Inchcape Rock ' is a ballard written by
- Poet Robert Southey:
- Inchcape Rock is a legend, a reef which is situated in the North Sea, close to the coastal region of Angus in Scotland.
- The poem is based on the series of events that took place around the dangerous rocks of the east coast of Scotland.
- The figures of speech used in this poem are Alliteration, Repetition, Antithesis, Inversion and Onomatopoeia.
- The poem gives us a message that those who do wrong things will meet with due punishment.
- In short - "As you sow, so shall you reap".

DO THE ACTIVITIES. (12 MARKS)

(A1) Complete the following statements.

(a) The Abbot of Aberbrothok placed a bell on the Inchcape Rock because..

(b) The mariners were grateful to the Abbot of Aberbrothok because.....

(c) The result of the thick haze that covered the sky was that.....

(d) The Rover in frustration pulled his hair and cursed himself because.....

(A2) Given below are the events that give the theme of the poem in a jumbled form. Arrange in a proper sequence as per their occurrence.

(a) The waves were so small that they did not move enough to ring the bell at the Inchcape Rock.

(b) The Abbot of Aberbrothok had placed the bell on a buoy on the rock.

(c) There was a thick haze spread over the atmosphere.

(d) Ralph bent over from the boat.

(e) Sir Ralph cursed himself in despair and in his frustration tore his hair.

(A3) The rhyme scheme of the poem_____

(A4) Match the following :

1) Buoy.	a) A tiny dot
2) Perilous.	b) Cause pain or trouble
3) Speck.	c) Floating object anchored in the sea to mark dangerous places
4) Plague	d) Dangerous

(A5) Down sunk the bell with a gurgling sound

The figure of speech and in line is_____

because_____

(A6) Write words you have come across in poem which belong to old English

(Archic English)


Thank You!

2.4 Have you Earned your tomorrow

- Edgar Guest

About the Poet

Edgar Guest (1881 to 1959) *was born in England and was brought to the United States when he was ten years old. He began his writing career in 1895 at the age of fourteen.*

Edgar Guest is known as 'people's poet' for his simple style and optimistic tone of writing. Guest is an American writer of newspaper and magazines.

This is an inspirational poem. In this poem, the speaker is asking the readers whether they have done anything to improve the life of another human being or not. It is up to you whether you will have a better future or not. Therefore, one should consider one's actions and deeds carefully and plan accordingly for a better future.

2.4 Have you Earned your Tomorrow

Is anybody happier because you passed his way?
Does anyone remember that you spoke to him today?
This day is almost over, and its toiling time is through;
Is there anyone to utter now a kindly word of you?

Did you give a cheerful greeting to the friend who came along?
Or a churlish sort of "Howdy" and then vanish in the throng?
Were you selfish pure and simple as you rushed along the way,
Or is someone mighty grateful for a deed you did today?

Can you say tonight, in parting with the days that's slipping fast,
That you helped a single brother of the many that you passed?
Is a single heart rejoicing over what you did or said;
Does a man whose hopes were fading now with courage look ahead?

Did you waste the day, or lose it, was it well or sorely spent?
Did you leave a trail of kindness or a scar of discontent?
As you close your eyes in slumber do you think that God would say,
You have earned one more tomorrow by the work you did today?

- Edgar Guest

Summary of the poem "Have you Earned your Tomorrow"

Have You Earned Your Tomorrow' by Edgar Guest presents a number of probing questions to a reader about how they spend their days.

The poem begins with the speaker asking a reader if they did anything to improve the day of another human being. He continues on to ask if the reader greeted their friends cheerfully or if instead they passed them by "churlish[ly]."

It is the end of the day and time is running out to guarantee one's actions are approved by God

In the second half of the poem the speaker inquires into the reader's actions further. He hopes that everyone does what they can to bring hope and courage to those who do not have it.

The poem concludes with the speaker reminding the reader that it is up to God whether or not "you" have a tomorrow. Therefore, one should consider their actions carefully if they want to see the next day.

Figures of Speech

Examples	Figures of Speech	Explanation
Or is someone mighty grateful for a deed you did today?	**Interrogation**	The question is asked here.
	Alliteration	The sound 'd' repeated here pleasingly.
Can you say tonight, in parting with the days that's slipping fast, That you helped a single brother of the many that you passed?	**Interrogation**	The question is asked here.
Is a single heart rejoicing over what you did or said; Does a man whose hopes were fading now with courage look ahead?	**Interrogation**	The question is asked here.
	Antithesis	The contradictory words *fade* and *courage* are used here
Is a single heart rejoicing over what you did or said;	**Personification**	The body part Personified, Rejoicing Heart.
	Synecdoche	*single heart* represents any human.
Did you waste the day, or lose it; was it well or sorely spent?	**Interrogation**	The question is asked here.
	Alliteration	The sound's' repeated here pleasingly.
	Antithesis	The contradictory words *well* and *sore* are used here
Did you leave a trail of kindness or a scar of discontent?	**Interrogation**	The question is asked here.
	Antithesis	The contradictory words *kindness* and *discontent* are used here
As you close your eyes in slumber do you think that God would say, You have earned one more tomorrow by the work you did today?	**Interrogation**	The question is asked here.

Examples	Figures of Speech	Explanation
Is anybody happier because you passed his way?	**Interrogation**	The question is asked here to put a point more effectively.
Does anyone remember that you spoke to him today?	**Interrogation**	The question is asked here.
*This day is almost over, and its **toiling time** is through;*	**Alliteration**	The sound 't' repeated here pleasingly.
Is there anyone to utter now a kindly word of you?	**Interrogation**	The question is asked here.
Did you give a cheerful greeting to the friend who came along?	**Interrogation**	The question is asked here.
Or a churlish sort of "Howdy" and then vanish in the throng?	**Interrogation**	The question is asked here.
	Alliteration	The sound 't' repeated here pleasingly.
Were you selfish pure and simple as you rushed along the way,	**Inversion**	The words are not in a proper order. The proper order of sentence is – You were pure selfish and simple as the way rushed along.

Read the following poem and do the activities : (12 m)

Is anybody happier.....work you did today?

A1. Have you earned your tomorrow means_____
(Complete the sentence in context with the poem) (2)

A2. Match the words with their meanings: (2)

A	B
1. Cheerful	a. With the feeling of disappointment
2. Selfish	b. Lack of satisfaction
3. Sorely	c. Happy
4. Discontent	d. Concerened with one's own pleasure

A3. The rhyme scheme of the poem is_____ and two pairs of rhyming words are _____ (2)

A4. Is anybody happier because you passed his way?
The figure of speech in this verse is _____ because

(2)

A5. Complete the following web: (2)

I can help the following people in which way

Parents Classmates Teachers Siblings

_____ _____ _____ _____

A6. What kind of help would you expect from your friends? (2)

With the help of the following points, write a poetic appreciation of the poem:

(4 marks)

- About the poem / poet and the title
- The theme
- Poetic style
- The language/ poetic devices used in the poem
- Special features
- Message, values, morals in the poem
- Your opinion about the poem

Appreciation of the poem

The title of the poem "Have you earned your tomorrow" seems to be rhetorical question which implies moral behaviour as it is self proclaiming title to inspire behave morally.
This poem is didactic as it teaches moral lesson about the behaviour and the kindness of heart.
The poem has many self answered questions to motivate the readers to be good with others to have a good future.
The poem is written by Edgar guest who was British born American poet. In the first half of the 20th century he became known as people's poet. His poems have an inspirational and optimistic view of everyday life.
The theme of the poem have you earned your tomorrow is about the result of a behaviour in the life of others and in our own life. If we encourage others or make them happy by encouraging and kind behaviour it is directly or indirectly beneficial for our tomorrow or future.
This poem is written in simple style. It uplifts the thought process and force us to analyse the self behaviour. It has four quatrain i.e four stanzas of four lines each. Rhyme scheme of the poem is aabb.
The special feature of the poem is the repetition of the sound -ay that appears in first, second and fourth stanza. It unifies the text.
The moral message of the poem is straight forward to try and make others happy by your behaviour and encourage the faded ones. Let them remember and talk good about you.
My personal opinion is that the poem touched me because it reflects how I feel. I believe we can brighten the day no matter what the circumstances are.


THANK
YOU!

ВК

Competency Statement

- *The students will be able :*
- *To understand the meaning and different ways of reconstitution.*
- *To understand the meaning and need of admission of partner.*
- *To learn the adjustments required on admission of a partner.*
- *To calculate the new profit sharing ratio and sacrifice ratio.*
- *To know the methods of valuation of goodwill and treatment of goodwill.*
- *To learn the accounting treatment of accumulated profits / loss.*
- *To To make necessary adjustments for revaluation of assets and liabilities.*
- *To learn to adjust the capitals according to new profit sharing ratio.*

3.1 Meaning of Reconstitution of Partnership :

The reconstitution of partnership primarily involves change in the form of partnership. There is change in agreement among the partners which leads to change in the relationship between the partners and change in share of the Profit or Losses of the partners in the firm. The change in the partnership may take the following forms :

3:1:1 Different forms of Reconstitution :

1) Change in Profit - Sharing of existing Partner

The partners of a firm may decide to change their existing profit sharing ratio. If one partner purchases a share of profit from another partner, the old partnership agreement stands terminated and the new agreement comes into force stating the new profit sharing ratio.

2) Admission of a Partner

When the new partner is admitted in the business he brings capital and his share of goodwill. Old partners have to sacrifice their share of profit for new partner. So the partnership agreement changes.

3) Retirement of a Partner

If the partner is retiring from partnership firm his share of profit, upto the date of retirement, capital, his share in other reserves of the firm will be paid to him. Old partners will gain the profit and there will be change in the profit sharing ratio.

4) Death of a Partner

Partner is going out of business due to death his legal heir will get the partner's share in the business. Share of Profit of continuing partners will change and old partnership agreement comes to an end.

3.2

Admission of a Partner :

According to section 31 (1) of the Partnership Act 1932, A person can be admitted as a new partner only with the consent of all existing partners unless otherwise agreed upon. New Partner will bring his share of goodwill and capital and enjoy the right to share the future profits.

This chapter covers the accounting treatment of admission of a partner in the existing partnership firm.

3.2.1

Need :

Generally, the new Partner is admitted in the firm to expand the capital base as well as to use the skills of that person to improve the overall performance of the partnership firm.

3.2.2

Capital brought by new partner :

The purpose of admitting new partner is to increase the capital of the partnership firm. The new partner can bring capital in Cash or kind. The new partner will bring the capital as per the terms in Partnership Deed. The accounting treatment for the capital brought in by the new partner is:

3.2.3

Transaction	Journal Entry
When new partner brings cash towards his Capital	Cash/Bank A/c ..... Dr. To New Partner's capital A/
When new partner brings certain assets towards his capital	Assets A/c..... Dr. To New Partner's capital A/c

New ratio

As the new partner is admitted in partnership firm the profit sharing ratio of existing partners changes and there is need to calculate new profit sharing ratio including new partner. This ratio is used for writing off goodwill and capital adjustments.

Formula for calculating new ratio

If total profit is 1

1(-) Share of new partner = Balance of 1

New Ratio = Old Ratio × Balance of 1

OR

If Sacrifice ratio of old partners is given along with old ratio the new ratio can be calculated as follows:

New Ratio = Old Ratio - Sacrifice Ratio

3.2.4 Sacrifice Ratio :

When new partner is admitted old partners have to sacrifice their share of profit to give the share of profit to new partner. The ratio in which the old partners sacrifice their share of profit is called as sacrifice ratio. This ratio is used to retain the goodwill in premium method.

Sacrifice ratio = Old Ratio - New Ratio

Change in the Profit sharing ratio due to admission of a partner

Illustrations

1: (Calculation of New ratio)

Mohan and Ganpat are sharing profits and losses in the ratio of 2:3. They admitted Chandrakant for 1/4th share in future profit. The new profit sharing ratio of Mohan, Ganpat and Chandrakant will be as under

Formula	=	1 – share of New Partner
	=	1– 1/4
	=	3/4 Remaining Profit
New Ratio	=	Old Ratio × balance of 1
Mohan's New Ratio	=	2/5×3/4 = 6/20
Ganpat's New Ratio	=	3/5× 3/4 = 9/20
Chandrakant's Ratio	=	1/4 i.e. 5/20

New Profit Sharing Ratio will 6:9:5

2: (Calculation of Sacrifice Ratio)

A and **B** are Partners sharing profits in the ratio of 6:4. C is admitted as a partner. The new profit sharing ratio of A, B and C is 10 : 6: 4. Find out the sacrificing ratio.

Sacrifice ratio	=	Old Ratio – New Ratio
A's sacrifice	=	6/10 – 10/20 = 2/20
B's Sacrifice	=	4/10 – 6/20 = 2/20

Sacrifice ratio of A and B = 2/20 : 2/20 or 2:2 = 1 :1

3: (Calculation of Sacrifice Ratio and New Ratio)

Pravin and Navin are partners sharing profits in the ratio of 7:3 They admit Reena for 1/5th share of profit which he takes equally from Pravin and Navin. Calculate sacrifice ratio and new profit sharing ratio.

Reena's share	=	1/5
Sacrifice Ratio of P and Q	=	1:1 or 1/2:1/2
Pravin's Sacrifice	=	1/5 × 1/2 = 1/10
Navin's Sacrifice	=	1/5 × 1/2 = 1/10
New Ratio	=	Old Ratio - Sacrifice Ratio
New Share of Pravin	=	7 /10 – 1/10 = 6 / 10
New share of Navin	=	3 / 10 – 1/10 = 2 / 10
Reena's share = 1/5th share	=	2/10
Therefore, New Ratio is 6:2:2	=	3:1:1

4: (Calculation of Sacrifice Ratio and New Ratio)

X and **Y** are partners sharing profits in the ratio 7:3. X surrenders 1/7th of his share and Y surrenders 1/3rd of his share in favour of Z, a new partner. Calculate new ratio and sacrificing ratio.

Old Ratio of X and Y = 7:3 or 7/10 : 3 /10

X's Sacrifice = 1/7 × 7/10 = 1/10

Y's Sacrifice = 1/3 × 3/10 = 1/10

Sacrificing ratio of X and Y = 1/10 :1/10 or 1:1

Z's share = X's share + Y's share = 1/10 + 1/10 = 2/10

X's New share = Old ratio – Sacrifice ratio = 7/10 – 1/10 = 6/10

Y's New share = Old ratio – Sacrifice ratio = 3/10 – 1/10 = 2/10

Therefore, New Ratio of X, Y and Z = 6:2:2 = 3:1:1

3.2.5

Meaning of Goodwill :

Goodwill is the benefit, name, fame, reputation, image of a business which ultimately helps the business to earn more profits. It is also because of the honesty, business ethics and hard work done by all the partners in the past years. Good will is calculated on the basis of part performances.

3.2.5.1

There are various methods of valuation of goodwill. For Std 12th following two main methods are included:

1) Average Profit Method

Under this method goodwill is calculated on the average basis of the past number of years of profit. It is assumed that the firm will maintain average profit for next certain years also and so the goodwill is calculated on the basis of certain number of years purchase of average profit.

Goodwill can be calculated as per this method by following these steps

i) Calculation of total profit

Total Profit is calculated by adding the profits of the previous years and deducting the losses, if any.

3.2.5.2 Treatment of Goodwill

Unlike other assets Goodwill is treated separately at the time of reconstitution of the firm. There are two methods of recording Goodwill in the books of accounts while admitting new partner in the firm.

(A) Premium Method

Under this method new partner brings his share of goodwill in cash or kind. It may be retained in the business or may be withdrawn by the old partners.

Sr. No	Transactions	Journal Entry
1	When new partner brings his share of goodwill in cash and it is retained in the business.	(a) Cash / Bank / A/c .....Dr. To Goodwill A/c (Being goodwill brought in by new partner) (b) Goodwill A/c .....Dr. To Old Partners' Capital / Current A/c **(Sacrifice Ratio)** (Being goodwill distributed among old partners)
2	When new partner brings his share of goodwill in cash and it is withdrawn by old partners.	(a) Cash / Bank / A/c..... .....Dr. To Goodwill A/c (Being goodwill brought in by new partner) (b) Goodwill A/c..... Dr. To Old Partners' Capital / Current A/c **(Sacrifice Ratio)** (Being goodwill distributed among old partners) (c) Old Partner's Capital / Current A/c. Dr. (Actual withdrawn) To Cash / Bank A/c (Being goodwill withdrawn by old partners)
3	When new partner brings his share of goodwill in cash and it is paid to old partners privately	In this case no entry is required to be passed the books of the firm.

(B) Valuation Method:

Under this method new partner does not bring his share of goodwill. So old partners measure the goodwill of the firm and then it is raised in the books of the firm at the time of admission of new partner.

Sr. No.	Transcation	Journal Entry
1	When new partner does not bring his share of goodwill in cash and it is raised in the books of the firm.	(a) Goodwill A/c.....Dr. To Old Partners' Capital / Current A/c **(Old Ratio)** (Being goodwill raised in the books of the firm) • Goodwill will appear in the New balance sheet on asset side.
2	When goodwill is raised and written off.	(a) Goodwill A/c.....Dr. To Old Partners' Capital / Current A/c **(Old Ratio)** (Being goodwill raised in the books) (b) All Partners Capital A/c .....Dr. **(New Ratio)** To Goodwill A/c (Being goodwill written off) • Goodwill will not appear in the New Balance sheet
3	When goodwill already appears in the books of the firm (In balance sheet) • If goodwill already appears in the Balance sheet and new partner brings goodwill in cash	In such cases, if the goodwill is revalued, the difference between revalued value of goodwill and its books value is transferred to Old partners' capital/ current A/c or Revaluation A/c • Then it is desirable to write off the goodwill appearing in the books among old partners in their old profit sharing ratio.

3.2.6 Revaluation of Assets and Liabilities

Meaning

Sr. No.	Transaction	Journal Entry
1.	Increasing the value of asset and Decreasing the value of liability	Asset A/c .....Dr. Liability A/c .....Dr. To Revaluation A/c / P & L Adjustment A/c (Being the value of asset increased and value of liability decreased)
2	Decreasing the value of asset and Increasing the value of liability	Revaluation A/c / P & L Adjustment A/c.....Dr. To Asset A/c To Liability A/c (Being the value of asset decreased and value of liability increased)
3.	Recording the unrecorded asset in the books of accounts	Asset A/c .....Dr. To Revaluation A/c (Being, unrecorded asset brought in the books of accounts)
4.	Creating new liability in the books	Revaluation A/c .....Dr. To New Liability A/c (Being unrecorded liability brought in the books of accounts)
5.	Transfer of Profit on Revaluation to old partner's Capital/Current A/c	Revaluation A/c .....Dr. To Old Partner's Capital/Current A/c (Being profit on revaluation credited to partners' capital/ current A/c)
6.	Transfer of Loss on Revaluation to old partners' Capitals/ Current A/c	Old Partners' Capital/ Current A/c .....Dr. To Revaluation A/c (Being loss on revaluation transferred to partners' capital / current A/c)

Dr. **Specimen of Revaluation / Profit & Loss Adjustment Account** **Cr.**

Particular	Amt (₹)	Paritcular	Amt (₹)
To Asset A/c (Decrease-- in Asset)	xxx	By Asset A/c (Increase in Asset)	xxx
To Liability (Increase in Liability)	xxx	By Liability (Decrease in Liability)	xxx
To Old Partners' Capital / Current A/c (Profit on Revaluation transferred)	xxx	By Old Partner's Capital / Current A/c (Loss on Revaluation transferred)	xxx

3.2.7 Adjustment of accumulated profit and Losses

Accumulated profit is the profit earned by the old partners before admitting the new partner that

ECONOMICS

Concepts of Demand

- **There are two concepts of demand.**

1) Individual demand.
2) Market demand.

- **Meaning**

1) **Individual demand:** Individual demand is the quantity of a commodity demanded by a consumer at a given price during a given period of time.

2) **Market demand:** Market demand is total demand for a commodity from all the consumers at a given price during a given period of time.

Individual Demand schedule

1)Individual demand schedule is a tabular representation showing different quantities of commodities that an individual consumer is prepared to buy at various prices over a given period of time.

2)

Price of commodity 'x' (`)	Quantity demanded of commodity 'x' (in kgs)
10	1
8	2
6	3
4	4
2	5

3) It is a narrow concept.

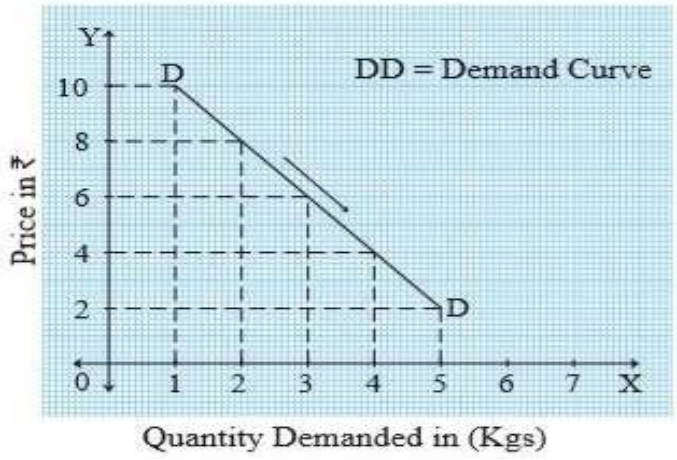
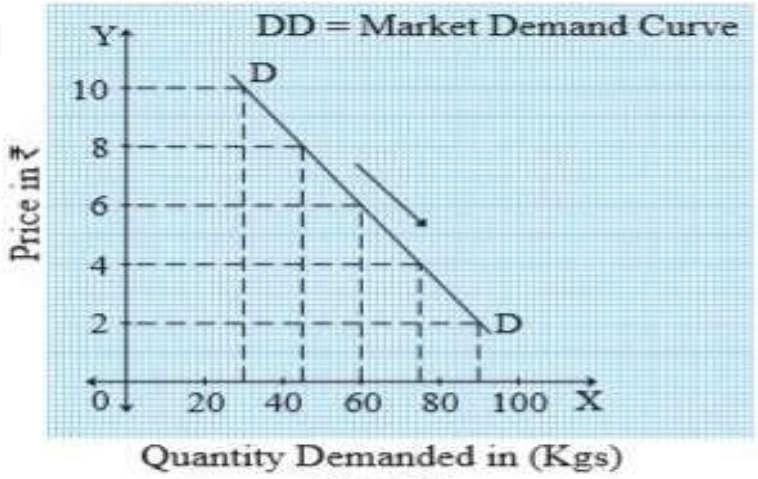
Market Demand Schedule

1) Market demand schedule is a tabular representation showing different quantities of commodity which all consumers are prepared to buy at various prices over a given period of time.

2)

Price of commodity	Quantity of 'x' demanded Kgs.			Market demand
'x'(`)	Con-sumer	Con-sumer	Con-sumer	A + B + C
	A	B	C	
10	5	10	15	30
8	10	15	20	45
6	15	20	25	60
4	20	25	30	75
2	25	30	35	90

3) It is a broader concept.

Individual Demand Curve	Market Demand Curve
1) Individual demand curve is a graphical representation of the individual demand schedule.	1) Market demand curve is a horizontal summation of individual demand curves represented graphically.
2) 	2) 
3)It is based on the individual demand schedule.	3) It is based on the market demand schedule.

ASSIGNMENT

Q.1) Observe the following table and answer the following questions :

Quantity demanded				
Price per kg. in `	Con-sumer A	Con-sumer B	Con-sumer C	**Market demand (in kgs) (A+B+C)**
25	16	15	12	
30	12	11	10	
35	10	09	08	
40	**08**	**06**	**04**	

a) Complete the market demand schedule.

b)Draw market demand curve based on above market demand schedule.

Q.2) Distinguish between :

1) Individual demand schedule and Market demand schedule.

2) Individual demand curve and Market demand curve.

THANK YOU

RELATIONSHIP BETWEEN MARGINAL UTILITY AND PRICE

RELATIONSHIP BETWEEN MARGINAL UTILITY AND PRICE

- The relationship between marginal utility and price is important in order to understand how the law of diminishing marginal utility forms the basis of law of demand.
- It is a perfect example of practical application of the law of Diminishing Marginal Utility (DMU).
- To understand the relation, it is essential to convert marginal utility in terms of money so that it can be compared with market price.

RELATIONSHIP BETWEEN MARGINAL UTILITY AND PRICE

Let us assume

Market price per unit of *x* = Rs.50.

1 unit of marginal utility = Rs.10

No of units	MU/ units of *x*	MU in terms of money 1unit = ₹ 10	Market price/unit of *x* = ₹ 50	Comparison between MU and price
1	10	100 (10 × ₹10)	₹ 50	100 MU > ₹50
2	8	80 (8 × ₹ 10)	₹ 50	80 MU > ₹50
3	7	70 (7 × ₹ 10)	₹ 50	70 MU > ₹50
4	5	50 (5 × ₹ 10)	₹ 50	50 MU = ₹50
5	3	30 (3 × ₹ 10)	₹ 50	30 MU < ₹50
6	1	10 (1 × ₹ 10)	₹ 50	10 MU < ₹50

(MUx > Px)

(Mu*x* > P*x*)
Intra marginal units

(Mu*x* = P*x*)
consumer's equilibrium

(Mu*x* < P*x*)
Extra marginal units

Q. 1. Complete the following statements by choosing the correct alternatives.

1) In the law of diminishing marginal utility, Alfred Marshall assumes that marginal utility of money…….

a) Increases b) remains constant

c) decreases d) rises and then falls

2) As per the law of diminishing marginal utility, measurement of utility is assumed to be …….

a) ordinal

b) cardinal

c) both ordinal and cardinal

d) none of the above

3) MU of the commodity becomes negative when TU of a commodity is ……

a) rising b) constant c) falling d) zero

4) Point of Satiety means …….

a) TU is rising and MU is falling

b) TU is falling and MU is negative

c) TU is maximum and MU is zero

d) MU is falling and TU is rising.

5) When MU is falling, TU is…….

a) rising b) falling

c) not changing d) maximum

Q. 2. Choose the correct option :

1)

A	B
1. Time utility	a) Transport
2. Place utility	b) Blood Bank
3. Service utility	c) Mobile phone
4. Knowledge utility	d) Doctor

Options :

i) 1-d, 2-b, 3-a, 4-c ii) 1-b, 2-a, 3-d, 4-c

iii) 1-a, 2-b, 3-c, 4-d iv) 1-b, 2-c, 3-d, 4-a

2) Statements indicating consumer equilibrium :

a) MU is greater than price

b) MU is equal to price

c) MU is less than price

d) Price is less than one

Options :

i) a and b ii) a, b, c and d

iii) a, b and c iv) only b

ANSWER KEY

Q.1. Complete the following statements by choosing the correct alternatives.

1) b) remains constant
2) b) cardinal
3) d) zero
4) c) TU is maximum and MU is zero
5) a) rising

Q.2. Choose the correct option :

1) ii) 1-b, 2-a, 3-d, 4-c
2) iv) only b

3A .DEMAND ANALYSIS

MEANING OF DEMAND

In Economics,demand means a desire which is backed by willingness and ability to pay.

Example:-If a person has the desire to purchase a television set but does not have the adequate purchasing power then it will be simply a desire and not a demand.

Demand=Desire+Willingness to purchase+Ability to pay

Definition of Demand:

According to Benham,”the demand for anything at a given price is the amount of it,which will be bought per unit of time at that price”

Features of demand

- Demand is that quantity of a commodity which a person is ready to buy at a particular price and during a specific period of time.
- When price of sugar is Rs.30 per Kg the demand for it is 10Kgs per week.
- The reference of price and time is essential for demand, because demand differs with price and time.
- Thus following features of demand are clear from the above.

1 DEMAND IS A RELATIVE CONCEPT

2 DEMAND IS ESSENTIALLY EXPRESSED WITH RFERENCETO TIME AND PRICE

OCM

PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

CH: 3 ENTREPRENEURSHIP DEVELOPMENT

-OCM DEPARTMENT

NMFC

PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

The process of entrepreneur has two steps:

- Training: The traditional school of thought had been thinking that 'entrepreneurs are born and not made' where as the modern observation mentions that some entrepreneurs may be born but a large number of them can be made by education and training. Hence, today there is a need of training to produce eligible future entrepreneurs.

PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

- Training is a scheme of instructions which is planned, systematic, consistent, pervasive and monitored to measure its effectiveness. It is an integral input of managerial development.
- Training broadens the vision of entrepreneurs by providing them suitable opportunities for an interchange of experience within and outside an industry. It builds necessary skills of new entrepreneurs. It imparts knowledge of marketing of goods, production methods, consumer's education etc.
- Training exposes an entrepreneur to the latest development which can directly or indirectly affects him.

PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

- With the help of training there can be minimization of excessive scraps, defective outputs and wastages in the production process. Training helps in improving overall efficiency of an entrepreneur.
- The process of training helps an entrepreneur to accept new technology, team spirit, standardization, reduces fatigue, minimizes industrial accidents etc. Some methods of training are lecture method,demonstration method, individual instructions, group instructions, meetings, conferences, seminars, etc.

PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

2) ENTREPRENEURSHIP DEVELOPMENT PROGRAMMES (EDP)

- An entrepreneurship development programme has been defined as 'a programme designed to help a person in strengthening his entrepreneurial motive and in acquiring skills and capabilities necessary for playing his entrepreneurial role efficiently'.

PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

- EDP is a device through which people with latent entrepreneurial traits are identified, motivated to take up new industrial venture, trained in managing the unit and guided in all aspects of starting a venture/an enterprise.
- EDP was first introduced in Gujarat in 1970 and was sponsored by the Gujarat Industrial Investment Corporation. The EDP's are based on McClellands experiments in Kakinanda District of Andhra Pradesh where businessmen were provided with motivation and training.

PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

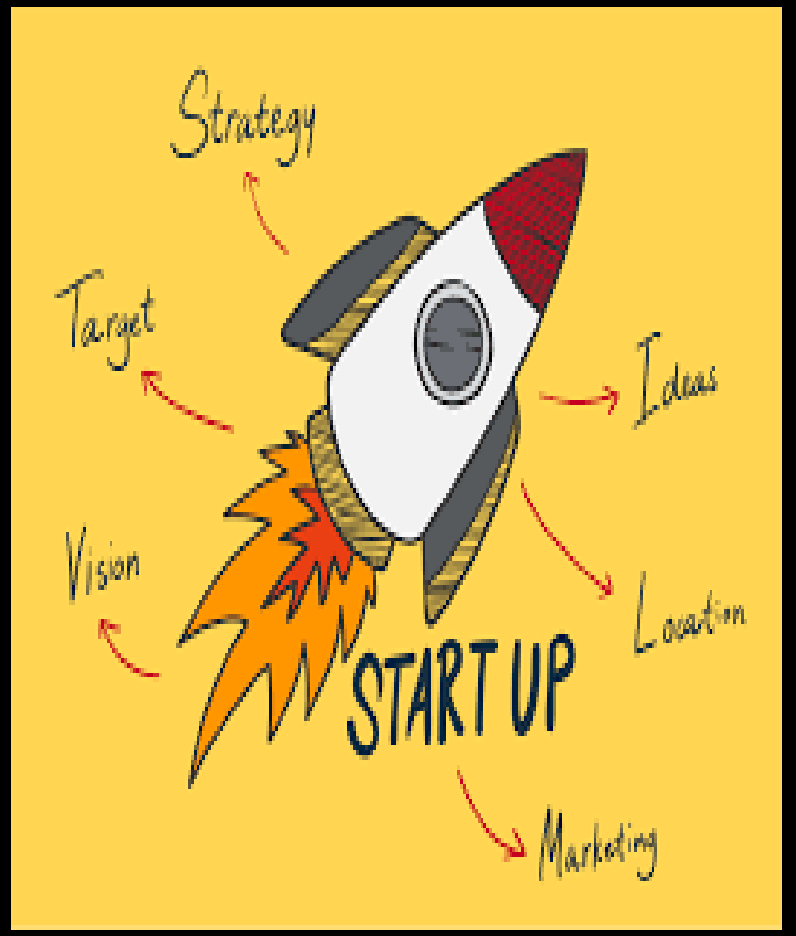
The Kakinada Experiment

- Conducted by McClelland in America, Mexico and Mumbai
- Under this experiment, young adults were selected and put through a three month training programme
- The training aimed at inducing the achievement motivation
- The course contents were–Trainees were asked to control their thinking and talk to themselves, positively–They imagined themselves in need of challenges and success for which they had to set planned and achievable goals–They strived to get concrete and frequent feedback–They tried to imitate their role models/those who performed well

PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

- **The EDP includes following steps:**

1) Arrangement of Infrastructure.
2) Selection of potential entrepreneur.
3) Identification of enterprise. .
4) Actual training program
5) Selection of training personnel.
6) Selection of method of training.
7) Actual training.
8) Monitoring and follow-up.



PROCESS OF ENTREPRENEURSHIP DEVELOPMENT

- **Objectives of EDP:**

The following objectives of EDP are identified.

1) To foster entrepreneurial growth in the country.
2) Optimum use of available resources.
3) Development of backward regions and improving economic status of socially disadvantaged groups.
4) Generation of employment opportunities.
5) Widening base for small and medium scale industries.

THANK YOU!

CH:3 ENTREPRENEURSHIP DEVELPOMENT

TOPIC: CHARACTERISTICS OF ENTREPRENEURSHIP DEVELOPMENT

NMFC

-OCM DEPARTMENT

ENTREPRENEURSHIP DEVELOPMENT.

Meaning

- Entrepreneurship is a purposeful activity of an individual or a group of associated individuals, undertaken to initiate, maintain and aggrandize profit by production and distribution of economic goods and services

Characteristics of Entrepreneurship

- Entrepreneurship is a process of setting up a new business organization.
- It is the process where one decides to build a business career by finding the market options and mobilizing the available resources.

Chapter:3 Entrepreneurship Development.

1) INNOVATION:

- Entrepreneurship is an innovation.
- The introduction of new combination of various factors of productions is innovation.
- A new product arrives in the market, uses new production technology, discovers new source of supply of raw materials and opens a new market for the specific product.
- In view of changing taste of consumers from time to time, entrepreneurship focuses on the research and development to produce goods to satisfy the customers.

Chapter:3 Entrepreneurship Development.

2) ECONOMIC ACTIVITY:

- An entrepreneur produces a new product for the customers as per their needs.
- He feels the need of this to satisfy human wants and as well in exchange earn a better livelihood.
- It is a systematically planned activity as per the skills and knowledge of entrepreneur. Hence entrepreneurship is an economic activity.

Chapter:3 Entrepreneurship Development.

3) **ORGANIZATION BUILDING**:

- It is an activity where various factors of production have to be organized.
- Place utility, time utility, form utility etc. has to be considered to collect them under one roof for new production.

Chapter:3 Entrepreneurship Development.

4) **CREATIVE ACTIVITY:**

- Innovation should have a strong support of creativity.
- Introducing creativity in producing something new is a big challenge for the entrepreneur.
- Thus creativity is an essential part of entrepreneurship.

Chapter:3 Entrepreneurship Development.

5) **MANAGERIAL SKILL AND LEADERSHIP:**

- A person who wants to be a successful entrepreneur should have more passion of doing something new than just earning profit.
- Leadership and managerial skills are the most important facets of entrepreneurship. Other skills can be considered secondary.
- An entrepreneur must have the ability to lead and manage.

L E A D E R S H I P

Chapter:3 Entrepreneurship Development.

6) **SKILLFUL MANAGEMENT:**

- The success of any entrepreneurship depends on the management of the organization.
- With professional management and skilled managers, entrepreneurship becomes successful activity.

Chapter:3 Entrepreneurship Development.

7) RISK BEARING:

- Uncertainty is defined as a risk which can not be insured against and is incalculable.
- Entrepreneur is an agent who buys factors of production at certain prices, In order to combine them into a product, to sell them at uncertain prices in future.
- Thus they too are risk-bearing agents in production.

Chapter:3 Entrepreneurship Development.

8) GAP FILLING FUNCTION:

- The most significant feature of entrepreneurship is gap filling.
- It is the entrepreneur's job to fill the gap or make up the deficiencies which always exist in the knowledge about the production function.

Chapter:3 Entrepreneurship Development.

- THANK YOU

NIRMALA MEMORIAL FOUNDATION COLLEGE OF COMMERCE &SCIENCE.

- OCM DEPARTMENT.

RECENT INITIATIVES IN ENTREPRENEURSHIP DEVELOPMENT :

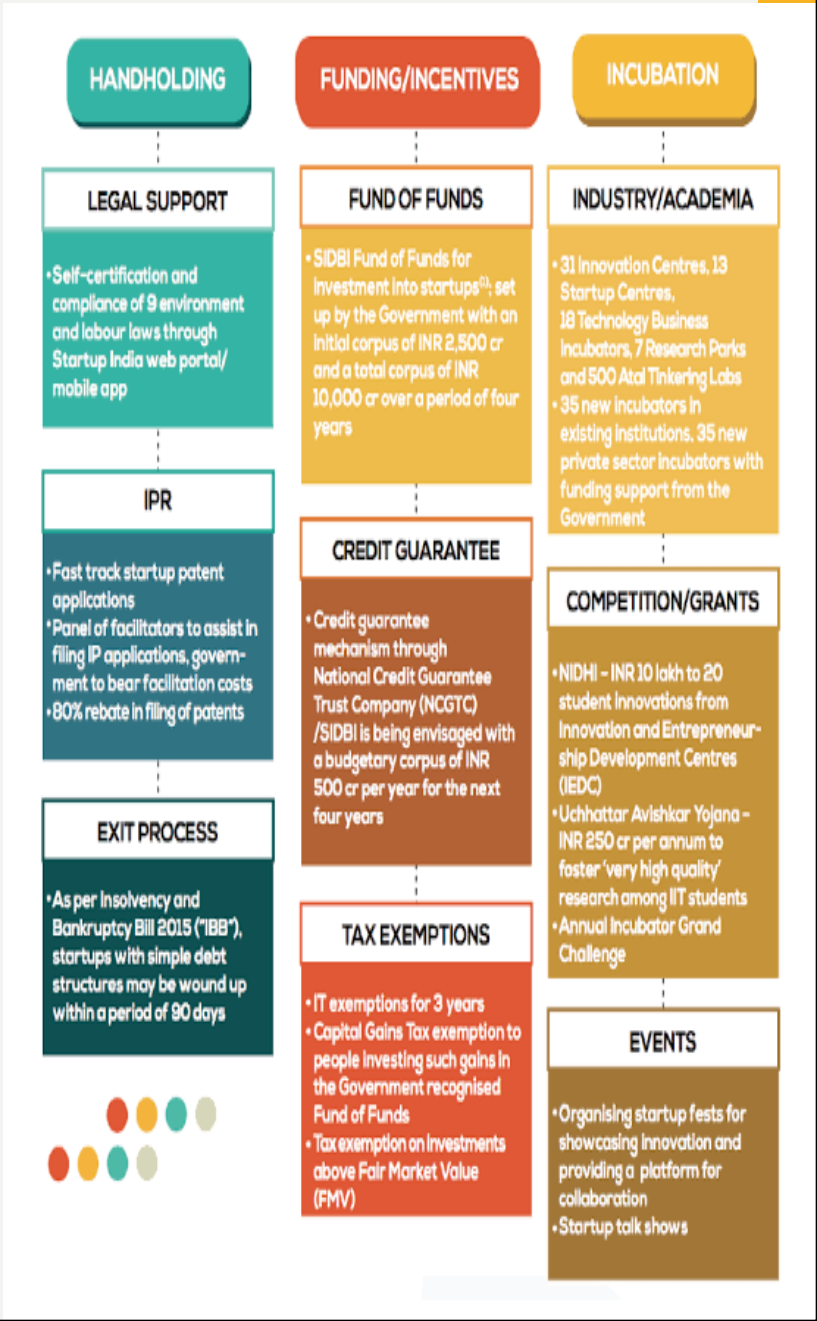
1. START UP INDIA :

MEANING : A start-up is defined as an entity having its headquarters in India, which was opened less than 10 years ago and has an annual turnover of less than Rs. 100 crores.

- It was launched in 2016 by Government of India.
- One of the objectives is to make India a nation of job creators, not job seekers.
- It aims at creating an ecosystem which will be conducive(help) starts-ups to grow and nurture in India.
- The government has already launched the I:MADE program, to help Indian entrepreneurs to build 10 lakh mobile app start-ups.
- The MUDRA Bank's scheme (Pradhan Mantri Mudra Yojana) is an initiative by Government to provide micro-finance, low interest rate loans to entrepreneurs from low socio-economic backgrounds.

START UP INDIA ACTION PLAN FOCUSES ON THE FOLLOWING AREAS :

1. SIMPLIFICATION & HANDHOLDING : Compliance procedures will be made easy. If necessary, winding up will also be allowed on fast track basis.
2. FUNDING SUPPORT & INCENTIVES : Government will participate in funding process indirectly as well as tax exemptions will be allowed in capital gain, income tax, etc.
3. INDUSTRY – ACADEMIA PARTNERSHIP & INCUBATION : Under this, Government is proposing to introduce Start up Fests to provide Pre-incubation training, to set up incubators with help of private sector, to launch innovation focused programs for students and so on.

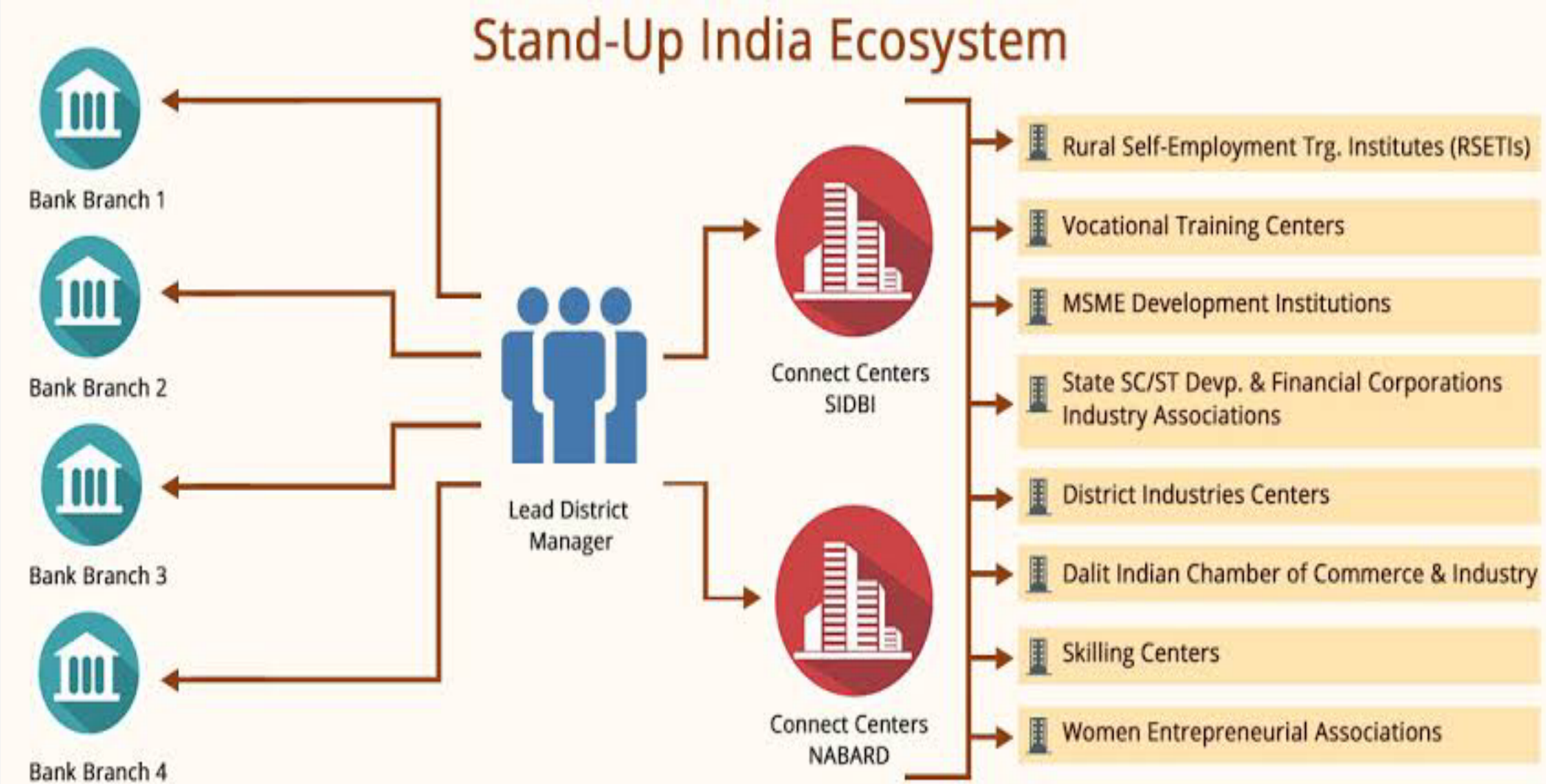


OBJECTIVES OF START UPS :

- 10,000 crore startup funding pool.
- Reduction in patent registration fees.
- Improved Bankruptcy Code, to ensure a 90-day exit window.
- Freedom from inspections for first 3 years of operation.
- Freedom from Capital Gain Tax for first 3 years of operation.
- Freedom from tax for first 3 years of operation.
- Self-glorification compliance.
- To target 5 lakh schools, and involve 10 lakh children in innovation-related programs.
- Encourage entrepreneurship within the country.
- Promote India across the world as a start-up hub.
- Built Startup Oasis as Rajasthan Incubation Center.

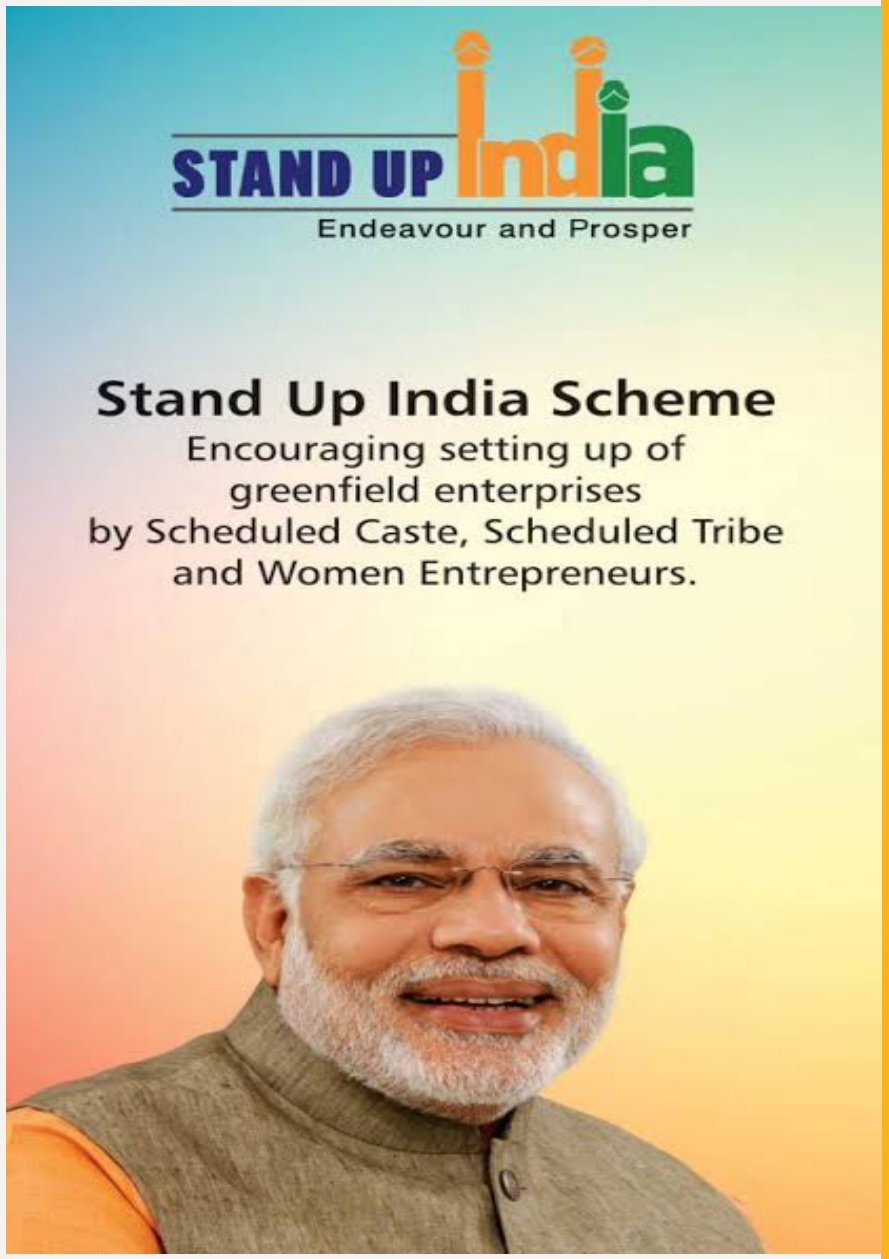
STAND UP INDIA :

- Stand-Up India Scheme for financing SC/ST and/or Women Entrepreneurs.



OBJECTIVES OF THE STAND-UP INDIA SCHEME :

- The objective of the Stand-Up India scheme is to facilitate bank loans between 10 lakh and 1 Crore to at least one Scheduled Caste (SC) or Scheduled Tribe (ST) borrower and at least one woman borrower per bank branch for setting up a greenfield enterprise.
- This enterprise may be in manufacturing, services or the trading sector. In case of non-individual enterprises at least 51% of the shareholding and controlling stake should be held by either an SC/ST or Woman entrepreneur.



STAND UP INDIA :

ELIGIBILITY :

- SC/ST and/or woman entrepreneurs, above 18 years of age.
- Loans under the scheme is available for only green field project. Green field signifies, in this context, the first time venture of the beneficiary in the manufacturing or services or trading sector.
- In case of non-individual enterprises, 51% of the shareholding and controlling stake should be held by either SC/ST and/or Women Entrepreneur.

NATURE OF LOAN :

Composite loan (inclusive of term loan and working capital) between Rs.10 lakh and upto Rs. 1 crore lakh.

STAND UP INDIA :

- **Purpose of Loan :**

For setting up a new enterprise in manufacturing, trading or services sector by SC/ST/Women entrepreneur.

- **Size of Loan :**

Composite loan of 75% of the project cost inclusive of term loan and working capital. The stipulation of the loan being expected to cover 75% of the project cost would not apply if the borrower's contribution along with convergence support from any other schemes exceeds 25% of the project cost.

- **Interest Rate :**

The rate of interest would be lowest applicable rate of the bank for that category (rating category) not to exceed (base rate (MCLR) + 3%+ tenor premium).

STAND UP INDIA :

Security :

- Besides primary security, the loan may be secured by collateral security or guarantee of Credit Guarantee Fund Scheme for Stand-Up India Loans (CGFSIL) as decided by the banks.

Repayment :

- The loan is repayable in 7 years with a maximum moratorium period of 18 months.

Working Capital :

- For withdrawal of Working capital upto 10 lakh, the same may be sanctioned by way of overdraft. Rupay debit card to be issued for convenience of the borrower.
- Working capital limit above 10 lakh to be sanctioned by way of Cash Credit limit.

Margin Money :

- TheScheme envisages 25% margin money which can be provided in convergence with eligible Central / State schemes.

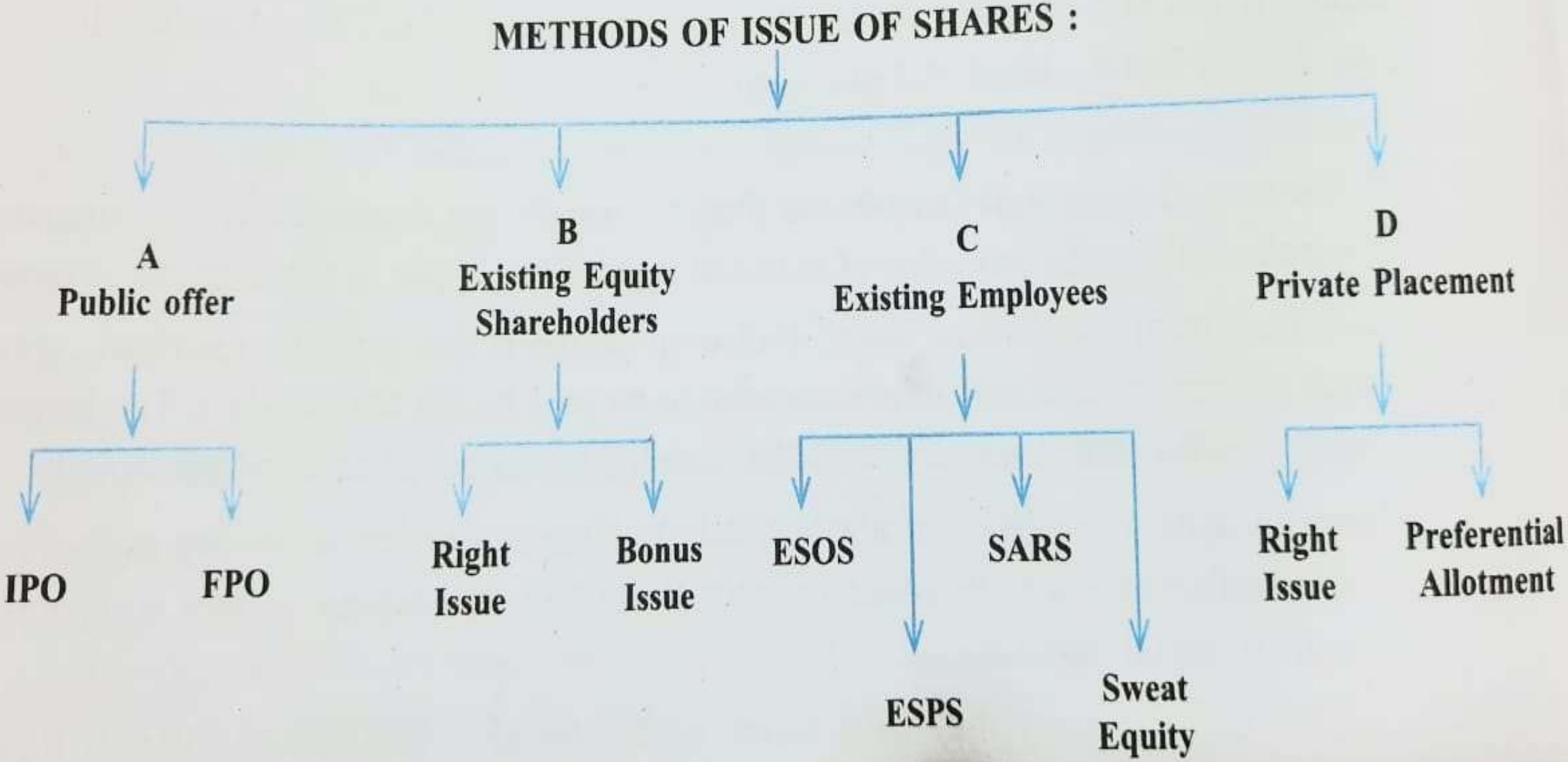
THE END

SP

CH. 3 ISSUE OF SHARE

TOPIC : METHODS OF ISSUE OF SHARE

3.3 METHODS OF ISSUE OF SHARES :



***THE COMPANIES CAN USE TWO PRICING METHODS TO OFFER SHARES TO THE PUBLIC.**

1) FIXED PRICE ISSUE METHOD - THE PRICE OF SHARES IS STATED IN THE PROSPECTUS.

2) BOOK BUILDING METHOD - THE PRICE OF SHARES IS DETERMINED THROUGH A BIDDING PROCESS. RED HERRING PROSPECTUS IS ISSUED.

***METHODS OF ISSUE OF SHARES**

A) PUBLIC OFFER

1) INITIAL PUBLIC OFFER - A NEW COMPANY OR AN EXISTING COMPANY OFFERING ITS SHARES TO THE PUBLIC FOR THE FIRST TIME.

2) FURTHER PUBLIC OFFER - WHEN A COMPANY ISSUES SHARES TO THE PUBLIC AFTER AN IPO.

B) EXISTING EQUITY SHAREHOLDERS

1) RIGHTS ISSUE/SHARES - WHEN A COMPANY WANTS TO RAISE FURTHER CAPITAL AND FIRST OFFER THE SHARES TO ITS EXISTING EQUITY SHAREHOLDERS.

2) BONUS ISSUE/SHARES - ARE FULLY PAID UP SHARES ISSUED FREE OF COST TO THE EXISTING EQUITY SHAREHOLDERS.

C) EXISTING EMPLOYEES

1) EMPLOYEES STOCK OPTION SCHEME (ESOS) - SCHEME WHEREIN PERMANENT EMPLOYEES, DIRECTORS, ETC. ARE OFFERED THE RIGHT TO PURCHASE EQUITY SHARES AT A PRICE LOWER THAN THE MARKET PRICE BUT AT A FUTURE DATE.

2) EMPLOYEE STOCK PURCHASE SCHEME (ESPS) - COMPANY OFFER SHARES AT A DISCOUNTED PRICE BUT THE PRICE OF SHARES IS DEDUCTED ON A REGULAR BASIS FROM EMPLOYEE'S SALARY.

3) STOCK APPRECIATION RIGHTS SCHEME (SARS) - SCHEME WHERE THE EMPLOYEES ARE GIVEN A RIGHT TO RECEIVE APPRECIATION IN VALUE OF SPECIFIED NUMBER OF SHARES OF THE COMPANY AT A FUTURE DATE.

4) SWEAT EQUITY SHARES - ARE SHARES ISSUED TO DIRECTORS OR EMPLOYEES AT A DISCOUNT OR FOR CONSIDERATION OTHER THAN CASH.

D) PRIVATE PLACEMENT

PRIVATE PLACEMENT - COMPANY OFFERS ITS SECURITIES TO A SELECT GROUP OF PERSONS NOT EXCEEDING 200.

PREFERENTIAL ALLOTMENT - COMPANY OFFERS EQUITY SHARES OR SECURITIES CONVERTIBLE INTO EQUITY SHARES TO A SELECT GROUP OF PERSONS ON PREFERENTIAL BASIS.

CHAPTER :03 ISSUE OF SHARES

DISTINGUISH BETWEEN

1. RIGHTS SHARES & BONUS SHARES
2. TRANSFER OF SHARES & TRANSMISSION OF SHARES

POINTS	RIGHTS SHARES	BONUS SHARES
1 . MEANING	In Rights issue company offers the existing equity share holders , the first option to buy the shares of the company	Bonus share are issued to the existing equity share holders FREE OF COST
2 . PAYMENT	The share holders have to pay for Rights shares.	Bonus share are issued to the existing equity share holders FREE OF COST
3 . MINIMUM SUBSCRIPTION	Company has to obtain minimum subscription.in case of failure the company has to refund the entire application money received	There is no minimum subscription to be collected as Bonus shares are issued FREE OF COST
4 . RIGHT TO RENOUNCE	The share holder can renounce his share	The share holder cannot renounce his Bonus share
5 . PURPOSE OF ISSUE	The purpose is to raise fresh funds by giving a chance to the existing members to buy the shares	The purpose is to reward the existing equity share holders ,by using the Reserve Fund

POINTS	Transfer of shares	Transmission of shares
MEANING	Transfer of share means voluntarily give away the shares to another person by entering in to a contract	Transmission of shares means transfer of ownership of share to the legal representative due to operation of law
2. When done	It is done when the share holder wants to sell or gift his shares	It is done when the share holder dies or becomes insolvent or insane
3. Nature of action	It is a voluntary action	It is a compulsory action due to operation of law
4. Parties involved	There are 2 parties A. TRANSFEROR B. TRANSFEREE	There is only 1 party – THE NOMINEE/LEGAL REPRESENTATIVE
5. Instrument of transfer	Instrument of transfer is required. It is a contract between the TRANSFEROR & TRANSFEREE	Instrument of transfer is not required.
6. Initiated by	The TRANSFEROR initiates the process	THE NOMINEE/LEGAL REPRESENTATIVE initiates the process
7. Stamp duty	Paid as per market value of shares	No stamp duty is to be paid

MATHS

INSURANCE & ANNUITY

Important Terms

- Insurance is nothing but creation of some security or monetary protection against any possible loss or damage to the life or property of a person.
- It offers protection against contingencies such as fire, earthquake, flood, burglary, etc., which cause loss to the life of a person, property, vehicles, etc.
- Insurance is a legal document of the agreement or contract between the insurance company (insurer) and the person who insures (insured).

There are two types of insurance:

1) Life Insurance:

- Under this insurance, a person pays a certain instalment of money (premium) periodically to the life insurance company so as to get insured for his life. The period may be of a month, a quarter, a year, etc.
- In this policy, the insured gets a guarantee from the insurance company to receive a definite sum of money after he has attained a certain age or maturity or on his death. This amount is called **Policy Value.**

2) General Insurance:

- All types of insurance except the life insurance are covered by general insurance.
- Under general insurance, a person can insure his property like buildings, factories, godowns containing goods against loss due to fire, earthquake, flood etc.
- Vehicles can also be insured against damage due to accidents.
- Here, the insurance company guarantees to pay compensation in proportion that exists between the policy value and property value in case of loss or damage.
- The insurer undertakes to pay only the actual amount of loss suffered by the insured.

Note: The insured person cannot make profit out of insurance.

A) Fire Insurance:

- In this type of insurance, property like buildings, godowns containing goods, factories, etc. can be insured against loss due to fire.
- **Property Value:** The value of entire property is called Property Value.
- **Policy Value:** The value of the property insured is called Policy Value.
- **Premium:** The amount paid to the insurance company to get the property insured is called Premium.
- The period for the fire insurance policy is **one year** and the premium rates are expressed as percentage of the value of the property insured.
- The value of damage is called **"loss"** and the amount which the insured can demand under the policy is called **"claim".**

$$\text{Claim} = \frac{\textit{Policy Value}}{\textit{Property Value}} \times \textit{loss}$$

B) Accident Insurance:

- Under such insurance, a person can insure his cars, trucks, two wheelers, etc. against damage caused due to accidents or unforeseen calamities.
- The policy also has the liability of the insured person to third parties involved in the accident. The period of such policies is one year.

C) Marine Insurance:

- This type of insurance covers the risk of damage in the transport of goods by sea. The premium of the policy depends upon the value of the ship and its cargo.
- The period of the policy is same as the period of the journey.
- The claims are calculated by the same method as that of fire insurance.

Note: (i) **Policy** value is calculated on property value at given percentage.

(ii) Premium is calculated on policy (insured) value.

FORMULAE:

- Policy Value = % of property value insured
- Premium = $Rate\ of\ Premium\ \times Policy\ value$
- Agent Commission = $Rate\ of\ commission\ \times Premium$
- Claim = $\frac{Policy\ Value}{Property\ Value}\ \times loss$
- Property Value $\xrightarrow{gives}$ Policy Value $\xrightarrow{gives}$ Premium $\xrightarrow{gives}$ Commission

EXERCISE 2.1

1) Find the premium on a property worth Rs.25,00,000 at 3% if (i) the property is fully insured, (ii) the property is insured for 80% of its value.

Sol: Property Value = Rs.25,00,000

Rate of premium = 3%

i) the property is fully insured

Since, the property is fully insured

∴ Policy Value = Property Value

∴ Policy Value = Rs. 25,00,000

∴ Premium = Rate of premium × Policy value

∴ Premium = $\frac{3}{100}\ \times 25{,}00{,}000 = 3 \times 25{,}000$

∴ **Premium = Rs. 75,000**

ii) the property is insured for 80% of its value.

Since, the property is insured for 80% of its value.

∴ Policy Value = 80% of Property Value

∴ Policy Value = $\frac{80}{100}\ \times 25{,}00{,}000$

$= 80 \times 25000$

$= 20{,}00{,}000$

∴ Premium = Rate of premium × Policy value

∴ Premium = $\frac{3}{100}\ \times 20{,}00{,}000$

$= 3 \times 20{,}000$

∴ **Premium = Rs. 60,000**

2) A shop is valued at Rs.3,60,000 for 75% of its value. If the rate of premium is 0.9%, find the premium paid by the owner of the shop. Also, find the agent's commission if the agent gets commission at 15% of the premium.

Sol: Property Value = Rs.3,60,000

Rate of premium = 0.9%

Rate of commission = 15%

Since, the property is insured of its 75 % of its value

∴ Policy Value = $\frac{75}{100} \times 3{,}60{,}000$

$= 75 \times 3600$

∴ **Policy Value = Rs.2,70,000**

∵Premium = Rate of premium × Policy value

∴ Premium = $\frac{0.9}{100}\ \times 2{,}70{,}000$

$= \frac{9}{1000}\ \times 2{,}70{,}000$

$= 9 \times 270$

∴ **Premium = Rs. 2430**

∵Commission = Rate of commission × Premium

∴Commission = $\frac{15}{100} \times 2430$

$= 15 \times 24.3$

∴Commission =Rs. 364.5

3) A person insures his office valued at Rs. 5,00,000 for 80% of its value. Find the rate of premium if he pays Rs.13,000 as premium. Also, find agent's commission at 11%.

Sol: Property Value = Rs.5,00,000

Rate of premium = ?

Total Premium = Rs. 13,000

Rate of commission = 11%

Since, the property is insured of its 80 % of its value

∴ Policy Value $= \frac{80}{100} \times 5{,}00{,}000$

$= 80 \times 5{,}000$

∴ Policy Value = Rs.4,00,000

∵Premium = Rate of premium × Policy value

∴ $13{,}000 = \frac{r}{100} \times 4{,}00{,}000$

∴ $13000 = r \times 4{,}000$

∴ $13{,}000 = 4000r$

∴ $r = \frac{13{,}000}{4000} = \frac{13}{4} = 3.25$

∴ Rate of Premium = 3.25%

∵Commission = Rate of commission × Premium

∴Commission $= \frac{11}{100} \times 13{,}000$

$= 11 \times 130$

∴Commission =Rs. 1,430

4) A building is insured for 75% of its value. The annual premium at 0.70 per cent amounts to Rs.2625. If the building is damaged to the extent of 60% due to fire, how much can be claimed under the policy?

Sol: Property Value = Rs.x

Rate of premium = 0.70%

Total Premium = Rs. 2,625

Since, the property is insured of its 75 % of its value

∴ Policy Value $= \frac{75}{100} \times x = 0.75 \times x$

∴ Policy Value = Rs $0.75x$

∵Premium = Rate of premium × Policy value

∴ $2{,}625 = \frac{0.70}{100} \times 0.75x$

∴ $x = \frac{2625 \times 100}{0.70 \times 0.75}$

∴ $x = 5{,}00{,}000$

∴ Property value= Rs. 5,00,000

∵ Policy Value = Rs $0.75x$

∴ Policy Value = Rs $0.75 \times 5{,}00{,}000 = 75 \times 5{,}000$

∴ Policy Value = Rs. 3,75,000

Since property is damaged to the extent of 60% due to fire

∴ loss = 60% of property value

∴loss $= \frac{60}{100} \times 5{,}00{,}000 = 60 \times 5{,}000$

∴loss = Rs. 3,00,000

∵ claim $= \frac{Policy\ value}{Property\ value} \times loss$

$= \frac{3{,}75{,}000}{5{,}00{,}000} \times 3{,}00{,}000$

∴claim = Rs. 2,25,000

5) A stock worth Rs.7,00,000 was insured for Rs.4,50,000. Fire burnt stock worth Rs.3,00,000 completely and damaged the remaining stock to the extent of 75% of its value. What amount can be claimed under the policy?

Sol: Property Value = Rs. 7,00,000

Policy Value = Rs. 4,50,000

Stock worth Rs. 3,00,000 was complete burnt and balance stock extent of 75 % of its value

Complete loss = Rs. 3,00,000

Partial loss = 75% of (7,00,000-3,00,000)

$= \frac{75}{100} \times 4{,}00{,}000$

$= 3,00,000$

loss = complete loss + partial loss

$= 3,00,000 + 3,00,000$

∴loss = Rs. 6,00,000

∵ claim $= \frac{Policy\ value}{Property\ value} \times loss$

$= \frac{4,50,000}{7,00,000} \times 6,00,000$

$= 3,85,714.285$

∴claim = Rs. 3,85,714.3

6) A cargo of rice was insured at 0.625% to cover 80% of its value. The premium paid was Rs.5250. If the price of rice is Rs.21 per kg. find the quantity of rice (in kg) in the cargo.

Sol: Property Value = Rs. x

Policy Value = 80 % of property value $= \frac{80}{100} \times x = 0.8x$

Rate of premium = 0.625 %

Premium = Rs. 5250

Premium = Rate of Premium × Policy Value

∴ $5250 = \frac{0.625}{100} \times 0.8x$

∴ $x = \frac{5250 \times 100}{0.625 \times 0.8} = 10,50,000$

Property value of rice = Rs. 10,50,000

∵ Rate of rice per kg = Rs. 21

∴ Quantity of Rice in Kg $= \frac{property\ value}{rice\ per\ kg}$

$= \frac{10,50,000}{21}$

$= 50,000$

∴ the cargo contained 50,000 kg of rice.

7) 60000 articles costing Rs.200 per dozen were insured against fire for Rs.2,40,000. If 20% of the articles were burnt and 7200 of the remaining articles were damaged to the extent of 80% of their value, find the amount that can be claimed under the policy.

Sol: No. of articles = 60,000

Cost per dozen = Rs 200

Insurance of article against fire = Rs. 2,40,000

20 % articles completely burnt.

7200 articles were damaged to 80 % of their value

Total no. of articles (in dozens) $= \frac{60,000}{12} = 5,000$

∴ Total no of articles in dozen = 5000

Property value = total no of articles in dozen × cost per dozen = 5000 × 200

∴ **Property value = Rs. 10,00,000**

Policy Value = Rs. 2,40,000

No. of articles complete burnt = 20 % of total article

$= \frac{20}{100} \times 60000 = 12,000$

No. of articles complete burnt in dozen $= \frac{12,000}{12} = 1000$

∴ **Complete loss = 1000 × 200 = Rs. 2,00,000**

Also, 7200 articles in dozen $= \frac{7200}{12} = 600$

Cost of 600 dozen articles = 600 × 200 = Rs. 1,20,000

Partial loss = 80% of 1,20,000

Partial loss $= \frac{80}{100} \times 1,20,000$

$= 80 \times 1200$

∴ **Partial loss = Rs. 96,000**

Loss = complete loss + partial loss .

$= 2,00,000 + 96,000$

$= 2,96,000$

∴ **Loss = Rs. 2,96,000**

∵ claim $= \frac{Policy\ value}{Property\ value} \times loss$

$= \frac{2,40,000}{10,00,000} \times 2,96,000$

∴ **claim = Rs. 71,040**

8) The rate of premium is 2% and other expenses are 0.075%. A cargo worth Rs.3,50,100 is to be insured so that all its value and the cost of insurance will be recovered in the event of total loss.

Sol: Rate of premium = 2 %

Other Expense = 0.075%

Let the policy value of cargo be Rs. 100 which include premium and other expenses.

∴ Property Value =100− [premium + other expense]

$$=100-[2+0.075]$$

∴ Property Value =Rs. 97.925

When value of Cargo Rs. 3,50,000 the policy value of cargo be Rs. x

Policy value	Property value
100	97.975
x	3,50,100

$\therefore 100 \times 3{,}50{,}100 = 97.975 \times x$

$\therefore x = \frac{3{,}50{,}10{,}000}{97.975}$

∴ **The policy Value of Cargo = Rs. 357518.51**

9) A property worth of Rs. 4,00,000 is insured with three companies. A, B and C. The amounts insured with these companies are Rs.1,60,000, Rs.1,00,000, Rs.1,40,000 respectively. Find the amount recoverable from each company in the event of a loss to the extent of Rs.9,000.

Sol: Property Value = Rs. 4,00,000

Loss = Rs.9,000

Company	claim $= \frac{Policy\ value}{Property\ value} \times loss$
A	$\frac{1{,}60{,}000}{4{,}00{,}000} \times 9{,}000 = 3{,}600$
B	$\frac{1{,}00{,}000}{4{,}00{,}000} \times 9{,}000 = 2{,}250$
C	$\frac{1{,}40{,}000}{4{,}00{,}000} \times 9{,}000 = 3150$

∴Claim for company A, Company B and Company C are Rs. 3600, Rs. 2250 and Rs. 3150

10) A car valued at Rs.8,00,000 is insured for Rs.5,00,000. The rate of premium is 5% less of 20%. How much will the owner bear including the premium if value of the car is reduced to 60% of its original value.

Sol: Property Value = Rs. 8,00,000

Policy Value = Rs. 5,00,000

Rate of Premium = 5% less of 20 %

$$= 5\% - 20\% \text{ of } 5$$

$$= 5\% - \frac{20}{100} \times 5 = 5\% - 1\%$$

$$= 4\%$$

Premium = rate × policy value $= \frac{4}{100} \times 5{,}00{,}000 = 4 \times 5000$

Premium = Rs. 20,000

Value of car is reduced to 60 % original value

Value of car $= (100 - 60)\% \times Property\ value$

$$= \frac{40}{100} \times 8{,}00{,}000$$

Loss = Value of Car = Rs. 3,20,000

Claim $= \frac{Policy\ value}{Property\ value} \times loss = \frac{5{,}00{,}000}{8{,}00{,}000} \times 3{,}20{,}000$

$$= \frac{5 \times 3{,}20{,}000}{8} = 5 \times 40{,}000$$

Claim = Rs. 2,00,000

Loss bear by owner = loss – claim + premium

$= 3{,}20{,}000 - 2{,}00{,}000 + 20{,}000$

Loss bear by owner = Rs 1,40,000

11) A shop and a godown worth Rs.1,00,000 and Rs.2,00,000 respectively were insured through an agent who was paid 12% of the total premium. If the shop was insured for 80% and the godown for 60% of their respective values, find the agent's commission, given that the rate of premium was 0.80% less 20%.

Sol: Property Value of Shop = Rs.1,00,000

Property Value of Godown = Rs.2,00,000

Agent's Commission = 12% of premium

Rate of premium = 0.80% less 20% = $0.80\ \% - (\frac{20}{100} \times 0.80)$

$$= \left(0.80 - \frac{16}{100}\right)\% = 0.64\%$$

For Shop

Shop is insured for 80 % of its value

Policy value of shop = $\frac{80}{100} \times 1{,}00{,}000 = 80{,}000$

Premium = $\frac{0.64}{100} \times 80{,}000 = 0.64 \times 800 = 512$

Premium for shop = Rs. 512

For Godown

Godown is insured for 60 % of its value

Policy value of shop = $\frac{60}{100} \times 2{,}00{,}000 = 1{,}20{,}000$

Premium = $\frac{0.64}{100} \times 1{,}20{,}000 = 0.64 \times 1200 = 768$

Premium for Godown = Rs. 768

Total Premium = Premium for Shop + Premium for Godown

$$= 512 + 768 = 1280$$

Total Premium = Rs. 1280

Agent commission = rate of commission × total premium

$$= \frac{12}{100} \times 1280 = 1.2 \times 128 = 153.6$$

Agent commission = Rs. 153.60

12) The rate of premium on a policy of Rs.1,00,000 is Rs. 56 per thousand per annum. A rebate of Rs.0.75 per thousand is permitted if the premium is paid annually. Find the net amount of premium payable if the policy holder pays the premium annually.

Sol: Policy Value = Rs.1,00,000

Rate of premium = Rs. 56 per thousand

Rebate of Rs. 075 per thousand is permitted if premium paid annually.

Since, policy holder pays the premium annually

Rate of Premium = $56 - 0.75$ = Rs. 55.25 per thousand

Let x be the premium on a policy of Rs. 1,00,000

Policy value	Premium
1000	55.25
1,00,000	x

$1000 \times x = 1{,}00{,}000 \times 55.25$

$x = \frac{5525000}{1000}$

$x = 5525$

Rs. 5525 is premium payable if the policy holder pays the premium annually.

13) A warehouse valued at Rs. 40,000 contains goods worth Rs.2,40,000. The warehouse is insured against fire for Rs.16,000 and the goods to the extent of 90% of their value. Goods worth Rs.80,000 are completely destroyed, while the remaining goods are destroyed to 80% of their value due to a fire. The damage to the warehouse is to the extent of Rs.8,000. Find the total amount that can be claimed.

Sol: For Warehouse

Property Value = Rs.40,000

Policy value of shop = Rs. 16,000

Loss = Rs. 8,000

$\because$ claim = $\frac{Policy\ value}{Property\ value} \times loss = \frac{16{,}000}{40{,}000} \times 8{,}000$

$\therefore$ claim = Rs. 3,200

For Goods

Property Value = Rs.2,40,000

Goods is insured for 90 % of its value

Policy value of shop $= \frac{90}{100} \times 2{,}40{,}000$

$= 90 \times 2400$

Policy value of shop = Rs. 2,16,000

Complete Loss = Rs. 80,000

Partial Loss = 80% of remaining = 80% of (Property value -80,000)

$= \frac{80}{100} \times (2{,}40{,}000 - 80{,}000) = \frac{80}{100} \times 1{,}60{,}000$

$= 8 \times 160{,}000$

Partial Loss = Rs 1,28,800

Loss = complete loss + partial loss

= 80,000 + 1,28,000

= Rs. 2,08,000

$\because$ claim $= \frac{Policy\ value}{Property\ value} \times loss$

$= \frac{2{,}16{,}000}{2{,}40{,}000} \times 2{,}08{,}000$

$\therefore$ claim = Rs. 1,87,200

Total Claim = claim for warehouse + claim for goods

= 3,200 + 1,87,200

$\therefore$ **Total claim = Rs. 1,90,400**

14) A person takes a life policy for Rs.2,00,000 for a period of 20 years. He pays premium for 10 years during which bonus was declared at an average rate of Rs.20 per year per thousand. Find the paid up value of the policy if he discontinues paying premium after 10 years.

Sol: Policy value = Rs. 2,00,000

Total Period = 20 years

Premium paid = 10 years

Bonus for 10 years = Rs. 20 per thousand per year

Bonus for 1 year $= \frac{20}{1000} \times 2{,}00{,}000 = 4000$

Bonus for 10 years = 10×4000= Rs. 40,000

Policy discontinue after 10 years

Policy value for 1 years $= \frac{2{,}00{,}000}{20}$

$= 10{,}000$

$\therefore$ Policy value for 10 years = 10 ×10,000

$\therefore$ **Policy value for 10 years = Rs. 1,00,000**

Total paid value of the Policy = Policy value for 10 year + bonus for 10 year

= 1,00,000+40,000

$\therefore$ **Total paid value of the Policy = Rs. 1,40,00**

Important Terms

- An annuity is a sequence of equal payments made at regular intervals of time, with compound interest on the payment.
- These intervals may be a year, a half year, a month etc.

e.g. Insurance premium paid either monthly, quarterly, semi annually or annually, School fees paid every month, Vehicle loan, etc.

- **Payment Period**: The time between two successive payment dates of an annuity is called its payment period or payment interval.
- **Term or duration**: The total time from the beginning of the first payment period to the end of last payment period is called the term or duration of an annuity.
- **Annuitant:** The person who receives the annuity is called annuitant.

- **Instalment**: The payment of each single annuity is called an instalment.

- **Cessation Period**: The time that intervenes between the payment of two successive instalments of an annuity is called its cessation period.

Types of Annuities: Annuities are classified according to how long the sequence of payments continues.

Annuity Certain: If the total number of time periods for which the annuity payments are made, is fixed in advance, the annuity is called an annuity certain.

e.g., The hire-purchase transactions, bank recurring deposits, etc.

Annuity Contingent: An annuity contingent is one whose payments are made till the happening of an event such as death of a person, the marriage of a girl, etc. e.g., Life Insurance premium is paid annually and stops when insured person dies.

Perpetual annuity or Perpetuity: It is an annuity whose payments continue forever. The beginning date of the perpetual annuity is known but the terminal date is not known.

e.g., Life time pension policy in which the policy holder pays premium for a fixed period, but continues to get pension for his whole life.

- **Classes of Annuity Certain**: Annuity certain is classified on the basis of payment, interval and time of payment. These are of three types.

- **Annuity Immediate or Ordinary Annuity:** If the payments fall due at the end of each period, the series is called annuity immediate. i.e., first payment falls due at the end of first interval.

- **Annuity Due:** If the payments fall due at the beginning of each period, the series is called annuity due. i.e., the first payment falls due at the beginning of the first interval.

- **Deferred or Reversionary Annuity**: If the money is allowed to accumulate for a certain period and the payments begin after the lapse of that period, the series is called deferred or reversionary annuity.

- **Present value of an annuity:** The present value of a given annuity is the sum of the present values of its different instalments i.e., the total worth of all the payments of annuity under consideration, at the beginning of the annuity.

- **Amount or Future value or Accumulated Value of an Annuity:** The accumulated value or the amount of annuity certain is the sum total of all the accumulated values of each payment calculated at the end of last period of the annuity at a given rate of compound interest.

Note:

- Only uniform and certain annuities will get consider.

- If type of annuity is not mentioned in the problem, then always assume that annuity is immediate.

- If it is not mentioned about type of interest in the problem, then always consider interest rate is compounded per annum.

- **Sinking Fund:** A sinking fund is a fund that is created to accumulate a specific sum of money at some definite date in future by paying regular and equal payments at compound interest.

- Usually an organization (e.g., a company, a housing society, etc.) sets up a sinking fund to replace a depreciating asset at a future date.

List of formulae:

Formulae for an immediate Annuity:

1) $i = \frac{r}{100}$

2) $A = \frac{C}{i}[(1+i)^n - 1]$

3) $P = \frac{C}{i}[1-(1+i)^{-n}]$

4) $A = P(1+i)^n$

5) $\frac{1}{P} - \frac{1}{A} = \frac{i}{C}$

A = Accumulate value,

C = immediate annuity,

r = compound rate of interest,

P= Present Value

Formulae required for an Annuity Due:

1) $A' = \frac{C(1+i)}{i}[(1+i)^n - 1]$

2) $P' = \frac{C(1+i)}{i}[1-(1+i)^{-n}]$

3) $A' = P'(1+i)^n$

4) $\frac{1}{P'} - \frac{1}{A'} = \frac{i}{C}$

Note : For annuity due, wee can use the formulae for annuity immediate (or ordinary annuity), only replacing C by $C(1+i)$

EXERCISE 2.2

1) Find the accumulated (future) value of annuity of Rs.800 for 3 years at interest rate 8% compounded annually. [*Given* $(1.08)^3 = 1.2597$]

Sol: $C = Rs.\ 800,\ n = 3\ years,\ r = 8\%$ p.a.,

$\because i = \frac{r}{100} = \frac{8}{100} = 0.08$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore A = \frac{800}{0.08}[(1+0.08)^3 - 1]$

$= \frac{80,000}{8}[(1.08)^3 - 1]$

$= 10,000[1.2597 - 1]$

$= 10,000(0.2597)$

$\therefore A$ =**Rs. 2597**

2) A person invested Rs.5,000 every year in finance company that offered him interest compounded at 10% p.a., what is the amount accumulated after 4 years? [*Given* $(1.1)^4 = 1.4641$]

Sol: $C = Rs.\ 5{,}000,\ n = 4\ years,\ r = 10\%\ p.a.,$

$\because i = \frac{r}{100} = \frac{10}{100} = 0.1$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore A = \frac{5000}{0.1}[(1+0.1)^4 - 1]$

$= \frac{50,000}{1}[(1.1)^4 - 1]$

$= 50,000[1.4641 - 1]$

$= 50,000(0.4641)$

$\therefore A$ =**Rs. 23,205**

3) Find the amount accumulated after 2 years if a sum of Rs.24,000 is invested every six months at 12% p.a. compounded half yearly. [*Given* $(1.06)^4 = 1.2625$]

Sol: $C = Rs.\ 24{,}000,\ n = 2\ years,\ r = 12\%$

Since amount is invested every six months

$n = 2\ years = 2 \times 2 = 4\ half\ years$

$r = 12\%\ p.a. = \frac{12}{2} = 6\%\ per\ half\ year$

$\because i = \frac{r}{100} = \frac{6}{100} = 0.06$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore A = \frac{24,000}{0.06}[(1+0.06)^4 - 1]$

$= \frac{24,00,000}{6}[(1.06)^4 - 1]$

$= 4,00,000[1.2625 - 1]$

$= 4,00,000(0.2625)$

$\therefore$ **A =Rs. 1,05,000**

4)Find accumulated value after 1 year of an annuity immediate in which Rs.10,000 are invested every quarter at 16% p.a. compounded quarterly.[*Given* $(1.04)^4 = 1.1699$]

Sol: $C = Rs.\ 10,000,\ n = 1\ years,\ r = 16\%$

Since amount is invested every quarter

$n = 1\ years = 1 \times 4 = 4\ quarter$

$r = 16\%\ p.a. = \frac{16}{4} = 4\%\ per\ quarter$

$\because i = \frac{r}{100} = \frac{4}{100} = 0.04$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore A = \frac{10,000}{0.04}[(1+0.04)^4 - 1]$

$= \frac{10,00,000}{4}[(1.04)^4 - 1]$

$= 2,50,000[1.1699 - 1]$

$= 2,50,000(0.1699)$

$\therefore$ **A =Rs. 42,475**

5) Find the present value of an annuity immediate of Rs.36,000 p.a. for 3 years at 9% p.a. compounded annually.[*Given* $(1.09)^{-3} = 0.7722$]

Sol: $C = Rs.\ 36,000,\ n = 3\ years,\ r = 9\%,$

$\because i = \frac{r}{100} = \frac{9}{100} = 0.09$

$\because P = \frac{C}{i}[1 - (1+i)^{-n}]$

$\therefore P = \frac{36,000}{0.09}[1 - (1+0.09)^{-4}]$

$= \frac{36,00,000}{9}[1 - (1.09)^{-4}]$

$= 4,00,000[1 - 0.7722]$

$= 4,00,000(0.2278)$

$\therefore$ **A =Rs. 91,120**

6) Find the present value of an ordinary annuity of Rs.63,000 p.a. for 4 years at 14% p.a. compounded annually. [*Given* $(1.14)^{-4} = 0.5921$]

Sol: $C = Rs.\ 63,000,\ n = 4\ years,\ r = 14\%$

$\because i = \frac{r}{100} = \frac{14}{100} = 0.14$

$\because P = \frac{C}{i}[1 - (1+i)^{-n}]$

$\therefore P = \frac{63,000}{0.14}[1 - (1+0.14)^{-4}]$

$= \frac{63,00,000}{14}[1 - (1.14)^{-4}]$

$= 4,50,000[1 - 0.5921]$

$= 4,50,000(0.4079)$

$\therefore$ **A =Rs. 1,83,555**

7) A lady plans to save for her daughter's marriage. She wishes to accumulate a sum of Rs. 4, 64,100 at the end of 4 years. What amount should she invest every year if she gets an interest of 10% p.a. Compounded annually? [Given $(1.1)^4 = 1.4641$]

Sol: $A = Rs.\ 4,64,100,\ n = 4\ years,\ r = 10\%\ p.a.$

$\because i = \frac{r}{100} = \frac{10}{100} = 0.1$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore 4,64,100 = \frac{C}{0.1}[(1+0.1)^4 - 1]$

$\therefore 4,64,100 \times 0.1 = C[(1.1)^4 - 1]$

$\therefore 46,410 = C[1.4641 - 1]$

$\therefore 46,410 = C \times 0.4641$

$\therefore C = \frac{46,410}{0.4641}$

$\therefore$ **C =Rs. 1,00,000**

8) A person wants to create a fund of Rs.6, 96,150 after 4 years at the time of his retirement. He decides to invest a fixed amount at the end of every year in a bank that offers him interest of 10% p.a.

compounded annually. What amount should he invest every year? [Given $(1.1)^4 = 1.4641$]

Sol: $A = Rs.\ 6{,}96{,}150,\ n = 4\ years,\ r = 10\%\ p.a.$

$\because i = \frac{r}{100} = \frac{10}{100} = 0.1$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore 6{,}96{,}150 = \frac{C}{0.1}[(1+0.1)^4 - 1]$

$\therefore 6{,}96{,}150 \times 0.1 = C[(1.1)^4 - 1]$

$\therefore 69{,}615 = C[1.4641 - 1]$

$\therefore 69615 = C \times 0.4641$

$\therefore \frac{69615}{0.4641} = C$

$\therefore \boldsymbol{C}$ **=Rs. 1,50,000**

9) Find the rate of interest compounded annually if an annuity immediate at Rs.20,000 per year amounts to Rs.2,60,000 in 3 years.

Sol: $A = Rs.\ 2{,}60{,}000\ ,\ C = Rs.\ 20{,}000,\ n = 3\ years$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore 2{,}60{,}000 = \frac{20{,}000}{i}[(1+i)^3 - 1]$

$\therefore \frac{2{,}60{,}000 \times i}{20{,}000} = [1 + 3i + 3i^2 + i^3 - 1]$

$\therefore 13i = 3i + 3i^2 + i^3$

$\therefore 13i = i(3 + 3i + i^2)$

$\therefore i^2 + 3i + 3 = 13$

$\therefore i^2 + 3i - 10 = 0$

$\therefore i^2 + 3i - 10 = 0$

$\therefore i^2 + 5i - 2i - 10 = 0$

$\therefore i(i+5) - 2(i+5) = 0$

$\therefore (i+5)(i-2) = 0$

$\therefore i + 5 = 0\ or\ i - 2 = 0$

$\therefore i = -5\ or\ i = 2$

$\because i \neq -5 \Longrightarrow \boldsymbol{i = 2}$

$\because i = \frac{r}{100} \Longrightarrow r = 100 \times i = 100 \times 2$

$\therefore \boldsymbol{r = 200\%}$**p. a.**

10) Find the number of years for which an annuity of Rs.500 is paid at the end of every year, if the accumulated amount works out to be Rs. 1,655 when interest is compounded annually at 10% p.a.

Sol: $A = Rs.\ 1{,}655\ ,\ C = Rs.\ 500,\ r = 10\%p.a.,$

$n =?$

$\because i = \frac{r}{100} = \frac{10}{100} = 0.1$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore 1{,}655 = \frac{500}{0.1}[(1+i)^n - 1]$

$\therefore 1{,}655 = 5{,}000[(1+i)^n - 1]$

$\therefore \frac{1{,}655}{5000} = (1+i)^n - 1$

$\therefore 0.331 = (1+i)^n - 1$

$\therefore 0.331 + 1 = (1+i)^n$

$\therefore (1+i)^n = 1.331$

$\therefore (1+i)^n = (1.1)^3$

$\therefore \boldsymbol{n = 3\ years}$

11) Find the accumulated value of annuity due of Rs.1000 p.a. for 3 years at 10% p.a. compounded annually. [Given $(1.1)^3 = 1.331$]

Sol: $C = Rs.\ 1{,}000,\ r = 10\%\ p.a.,\ n = 3\ years$

$\because i = \frac{r}{100} = \frac{10}{100} = 0.1$

$\because A' = \frac{C(1+i)}{i}[(1+i)^n - 1]$

$\therefore A' = \frac{1{,}000(1+0.1)}{0.1}[(1+0.1)^3 - 1]$

$= 10{,}000 \times 1.1[(1.1)^3 - 1]$

$= 11{,}000[1.331 - 1]$

$= 11{,}000 \times 0.331$

$\therefore \boldsymbol{A' = Rs.\ 3641}$

12) A person plans to put Rs.400 at the beginning of each year for 2 years in a deposit that gives interest at 2% p.a. compounded annually. Find the amount that will be accumulated at the end of 2 years.

Sol: $C = Rs.\ 400,\ r = 2\%\ p.a.,\ n = 2 years$

$\because i = \frac{r}{100} = \frac{2}{100} = 0.02$

$\because A' = \frac{C(1+i)}{i}[(1+i)^n - 1]$

$\therefore A' = \frac{400(1+0.02)}{0.02}[(1+0.02)^2 - 1]$

$= \frac{40,000 \times 1.02}{2}[(1.02)^2 - 1]$

$= 20,000 \times 1.02[1.0404 - 1]$

$= 20,400 \times 0.0404$

$\therefore \boldsymbol{A' = Rs.\ 824.16}$

13) Find the present value of an annuity due of Rs.600 to be paid quarterly at 32 % p.a. compounded quarterly. [Given $(1.08)^{-4} = 0.7350$]

Sol: $C = Rs.\ 600,\ r = 32\%\ p.a.,\ n = 1\ year$

Since amount is invested every quarter

$n = 1\ years = 1 \times 4 = 4\ quarter$

$r = 32\ \%\ p.a.\ = \frac{32}{4} = 8\ \%\ per\ quarter$

$\because i = \frac{r}{100} = \frac{8}{100} = 0.08$

$\because P' = \frac{C(1+i)}{i}[1 - (1+i)^{-n}]$

$\therefore P' = \frac{600(1+0.08)}{0.08}[1 - (1+0.08)^{-4}]$

$= \frac{60,000 \times 1.08}{8}[1 - (1.08)^{-4}]$

$= 7,500 \times 1.08[1 - 0.7350]$

$= 8,100 \times 0.265$

$\therefore \boldsymbol{P' = Rs.\ 2146.5}$

14) An annuity immediate is to be paid for some years at 12% p.a. The present value of the annuity is Rs.10,000 and the accumulated value is Rs.20,000. Find the amount of each annuity payment.

Sol: $P = Rs.\ 10,000,\ A = Rs.\ 20,000,\ r = 12\%$

$i = \frac{r}{100} = \frac{12}{100} = 0.12$

$\because \frac{1}{P} - \frac{1}{A} = \frac{i}{C}$

$\therefore \frac{1}{10,000} - \frac{1}{20,000} = \frac{0.12}{C}$

$\therefore \frac{1}{10,000}\left[1 - \frac{1}{2}\right] = \frac{0.12}{C}$

$\therefore \frac{1}{10,000} \times \frac{1}{2} = \frac{0.12}{C}$

$\therefore \frac{1}{20,000} = \frac{0.12}{C}$

$\therefore C = 20,000 \times 0.12$

$\therefore \boldsymbol{C = Rs.\ 2,400}$

15) For an annuity immediate paid for 3 years with interest compounded at 10% p.a., the present value is Rs.24,000. What will be the accumulated value after 3 years? [Given $(1.1)^3 = 1.331$]

Sol: $P = Rs.\ 24,000,\ r = 10\%\ p.a.,\ n = 3,\ A =?$

$i = \frac{r}{100} = \frac{10}{100} = 0.1$

$\because A = P(1+i)^n$

$\therefore A = 24,000(1+0.1)^3$

$\therefore A = 24,000(1.1)^3$

$\therefore A = 24,000 \times 1.331$

$\therefore \boldsymbol{A = Rs.\ 31,944}$

16) A person sets up a sinking fund in order to have Rs.1, 00,000 after 10 years. What amount should be deposited bi-annually in the account that pays him 5% p.a. compounded semi-annually? [Given $(1.025)^{20} = 1.675$]

Sol: $A = Rs.\ 1,00,000,\ n = 10\ years,\ r = 5\%\ p.a.,$

Since amount is invested bi-annually(half yearly)

$n = 10\ years = 2 \times 10 = 20\ half\ year$

$r = 5\ \%\ p.a.\ = \frac{5}{2} = 2.5\ \%$ half year

$\because i = \frac{r}{100} = \frac{2.5}{100} = 0.025$

$\because A = \frac{C}{i}[(1+i)^n - 1]$

$\therefore 1,00,000 = \frac{C}{0.025}[(1+0.025)^{20} - 1]$

$\therefore 1,00,000 \times 0.025 = C[(1.025)^{20} - 1]$

$\therefore 2,500 = C[1.675 - 1]$

$\therefore 2,500 = C \times 0.675$

$\therefore C = \frac{2500}{0.675} = 3,703.7037$

$\therefore \boldsymbol{C}$ =**Rs. 3,703.70**

IT

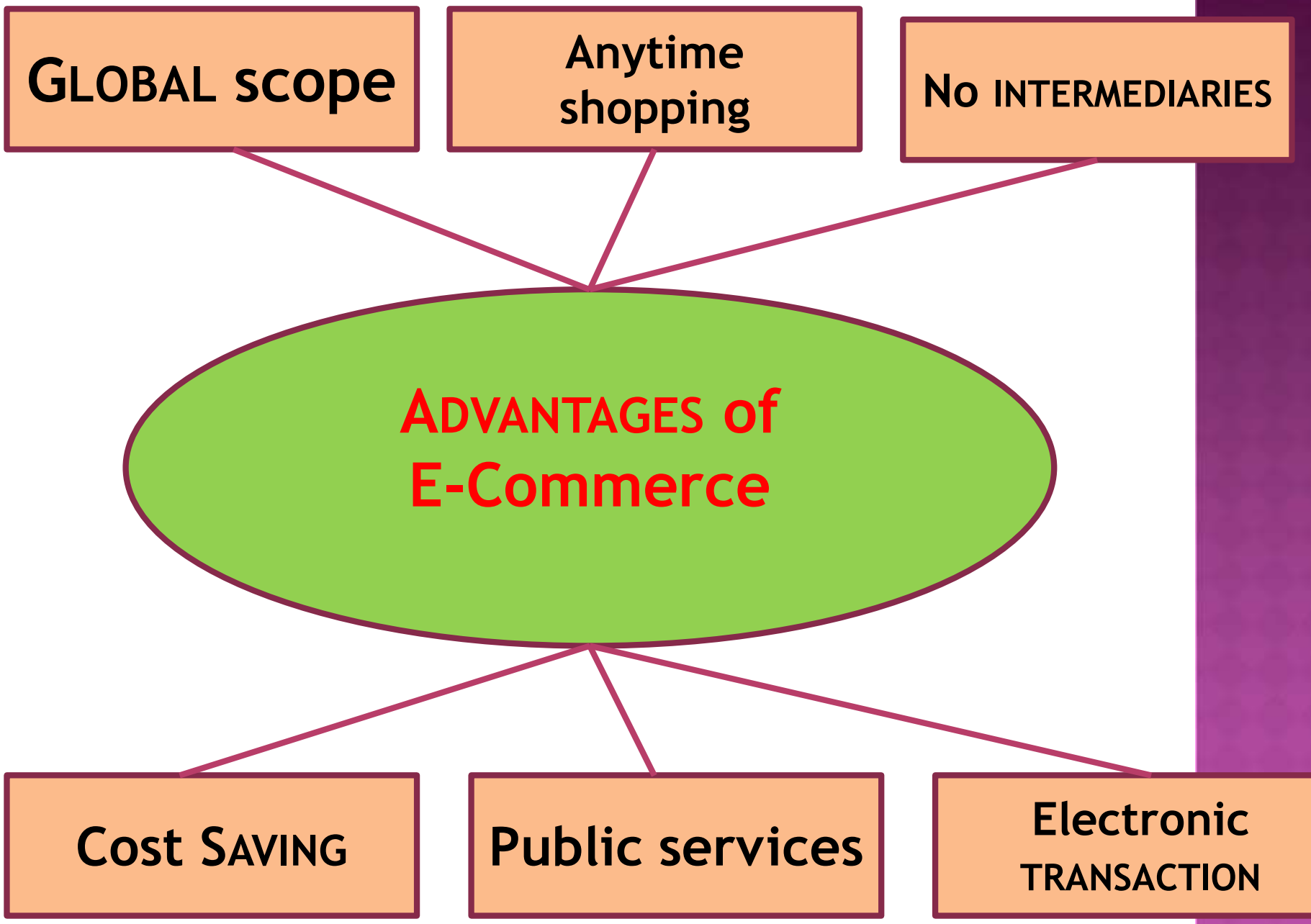
E-COMMERCE AND E-GOVERNANCE

E-COMMERCE

- E-Commerce can be broadly defined as the process of buying and selling of goods or services using an electronic medium such as Internet.
- E-commerce is also referred as a paperless exchange of business information using EDI, E-mail, Electronic fund transfer etc.

DIFFERENCE BETWEEN TRADITIONAL COMMERCE AND E-COMMERCE

TRADITIONAL Commerce	E-commerce
TRADITIONAL commerce focuses on the ex- CHANGE of products AND services through PERSONAL INTERACTIONS so it is MANUAL.	E-commerce TRADING ACTIVITIES ARE online VIA the internet AND CAN be considered AUTOMATIC.
TRADITIONAL commerce is limited to business hours, mostly during the DAY.	E-commerce is 24X7, it CAN be done ANYTIME DAY AND night.
As FAR AS CONSUMER INTERACTIONS ARE concerned, TRADITIONAL commerce provides FACE to FACE INTERACTION.	E-commerce CAN be termed AS SCREEN to FACE INTERACTION.
TRADITIONAL commerce is limited to A PARTICULAR GEOGRAPHICAL LOCATION.	E-commerce is GLOBAL AND HAS no PHYSICAL LIMITATION.
Modes of PAYMENT in TRADITIONAL commerce include CASH, cheques AND credit CARDS.	In E-commerce modes of PAYMENTS ARE BANK TRANSFER, credit CARD, E-WALLET, mobile PAYMENT AND MANY more.


GLOBAL scope
Anytime shopping
No INTERMEDIARIES
ADVANTAGES of E-Commerce
Cost SAVING
Public services
Electronic TRANSACTION

Disadvantages of E-commerce :

- Setup Cost
- Physical presence
- Security
- Goods Delivery

TYPES OF E-COMMERCE : BUSINESS - TO - BUSINESS (B2B):

- In B2B model, business sells it's products to AN INTERMEDIATE buyer who then sells the product to the FINAL customer.
- As AN EXAMPLE, A WHOLESALER PLACES AN order from A COMPANY'S website AND AFTER receiving the consignment, sells the product to the FINAL customer who comes to buy the product AT one of its RETAIL outlets.

BUSINESS - TO - CONSUMER (B2C)

- In B2C model, business sells it's products directly to A CUSTOMER.
- A customer CAN view the products shown on the website. The customer CAN choose A product AND order the SAME.

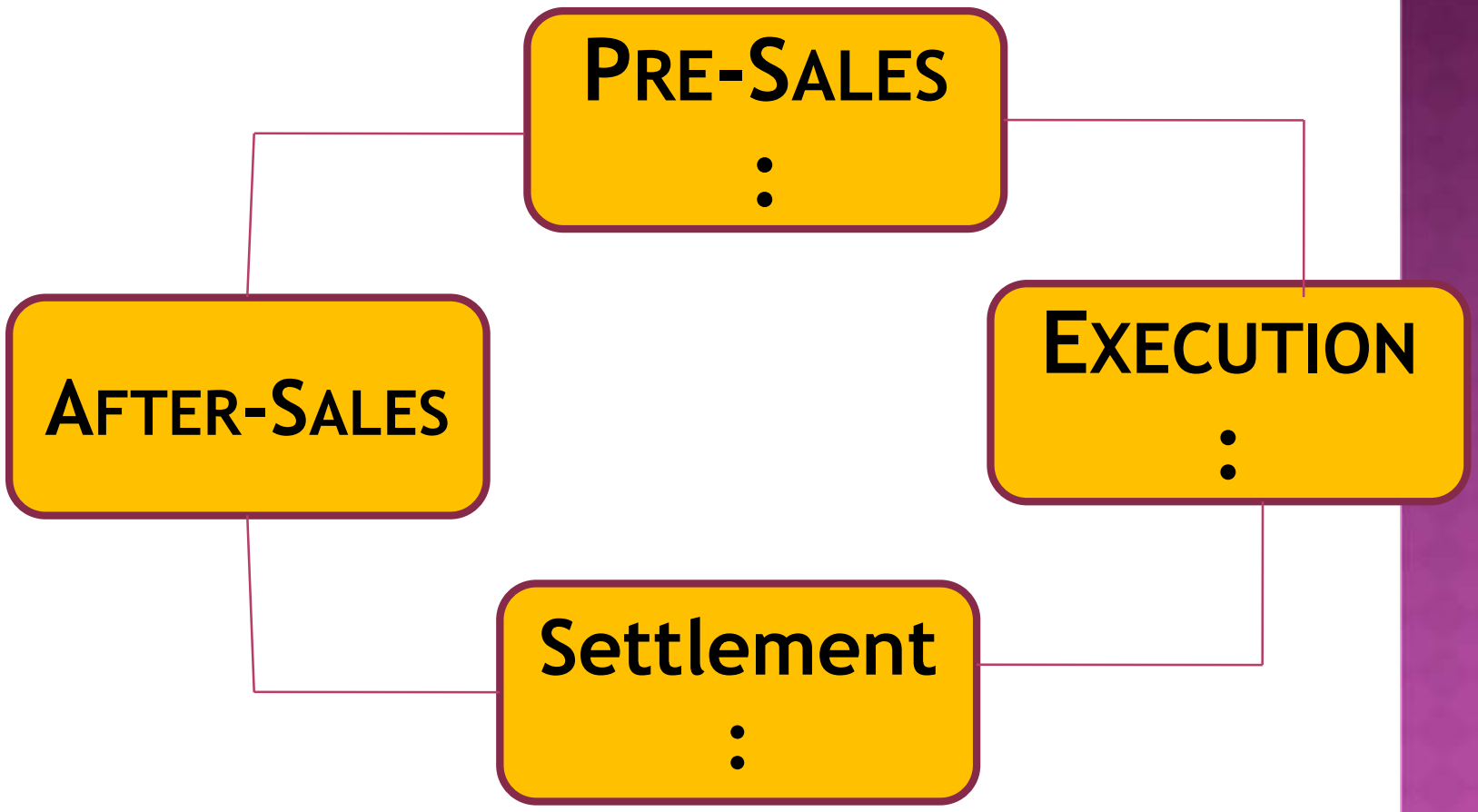
CONSUMER - TO - BUSINESS (C2B) :

- In this model, consumers HAVE products or services of VALUE THAT CAN be consumed by businesses.
- For e.g. - A blog CAN be written by AN AUTHOR for A business to improve SALE of products, EBAY.

CONSUMER - TO - CONSUMER (C2C)

- In C2C model, consumer helps
- consumer to sell their ASSETS like RESIDENTIAL property, CARS, motorcycles etc., or rent A room by publishing their INFORMATION on the website. Website MAY or MAY not CHARGE the consumer for its services. EXAMPLE OLX, Quikr, online AUCTION.

E-Commerce TRADE Cycle



Pre-Sales :

- It consist of two steps like Search and Negotiate. Customer search for required website for product to be purchased.
- In Negotiate step customer find a supplier who offers good quality product at cheaper price and then customer agrees the terms forwarded by supplier.

EXECUTION :

- This PHASE consist of Order AND Delivery. Customer sends AN order for the selected product AND AFTER processing the order, customer receives delivery of the product.

SETTLEMENT :

- This PHASE consist of Invoice (if ANY) AND PAYMENT. Invoice MEANS customer will receive A bill for PURCHASED product AND AFTER CONFIRMATION of received product, customer will PAY for the SAME.

After-Sales :

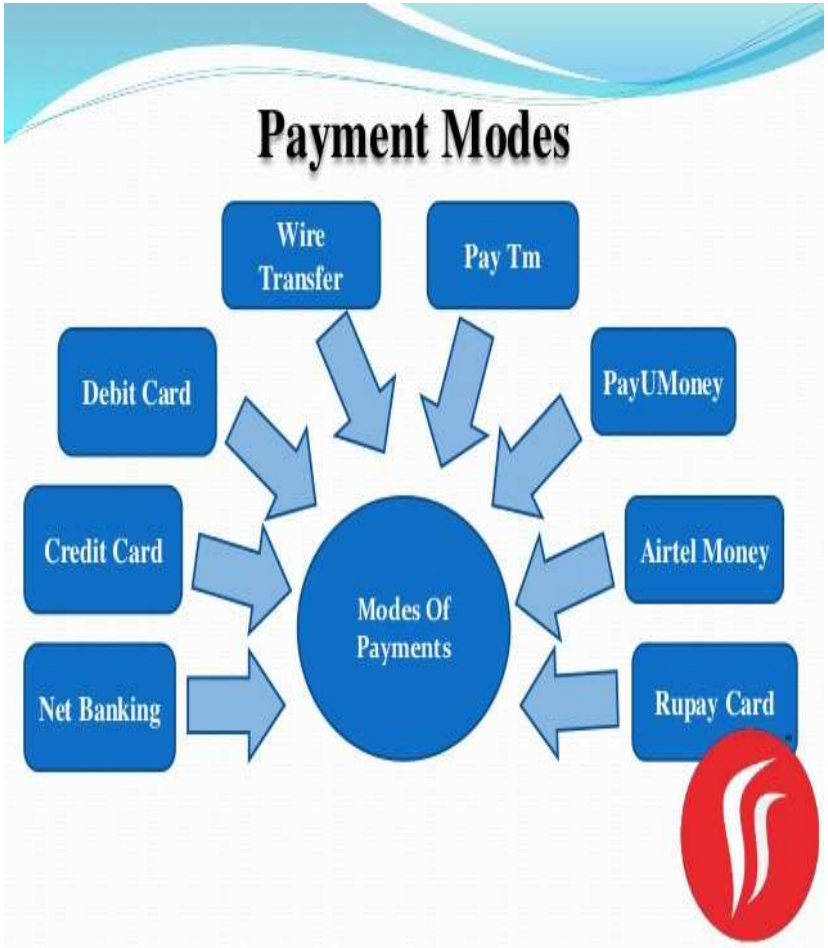
- This PHASE consists of WARRANTY AND After SALE Services. In WARRANTY period, customer will get ALL MAINTENANCE services for free or AT minimum cost.
- After SALE services MEANS customer will do COMPLAINTS (if ANY) ABOUT the PERFORMANCE of product AND get MAINTENANCE service from the supplier.

Modes of Payment

- **Credit Cards :** Credit cards are the most common way for customers to pay online.
- **Mobile Payments :** Mobile payments offer a quick solution for customers to purchase on e-commerce websites.

- **BANK TRANSFERS :** BANK TRANSFER is used when money is sent from one BANK ACCOUNT to ANOTHER.

- **E-WALLETS :** E-WALLET is A type of electronic CARD which is used for TRANSACTIONS MADE online through A computer or A SMARTPHONE.



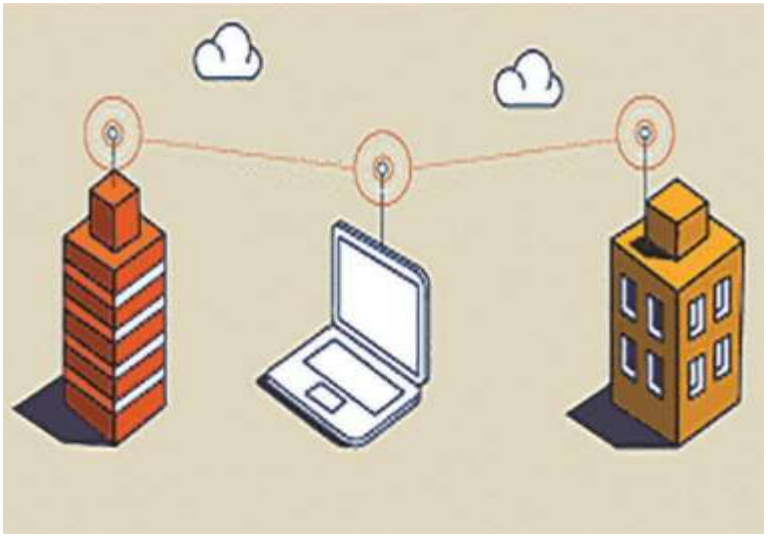
Forms of E-Commerce

- **M-commerce (Mobile commerce) :** M-Commerce is the buying AND selling of goods AND services through wireless HANDHELD devices such AS SMARTPHONES AND TABLETS.
- m-commerce ENABLES users to ACCESS online shopping PLATFORMS without needing to use A desktop computer.

- **Social Commerce :** Social commerce is a form of electronic commerce that involves social media, online media that supports social interaction. It enable shoppers to get advice from trusted individuals, find goods and services and then purchase them.

E-Commerce Technology
Electronic DATA INTERCHANGE (EDI) :

- EDI is the electronic INTERCHANGE of business INFORMATION using A STANDARDIZED FORMAT; A process which ALLOWS one COMPANY to send INFORMATION to ANOTHER COMPANY ELECTRONICALLY RATHER THAN on PAPER.
- Business entities conducting business ELECTRONICALLY ARE CALLED TRADING PARTNERS.
- It is computer-to-computer INTERCHANGE of strictly FORMATTED documents VIA telecoMMUNICATIONS or PHYSICALLY TRANSPORTED on electronic STORAGE MEDIA.



E-GOVERNANCE

- It signifies the IMPLEMENTATION of INFORMATION technology in the government processes AND functions so AS to CAUSE simple, MORAL, ACCOUNTABLE AND TRANSPARENT GOVERNANCE. The BASIC purpose of E-GOVERNANCE is to simplify processes for ALL, i.e. government, citizens, businesses etc.

Advantages OF E-governance :

- Reduced corruption
- High TRANSPARENCY
- INCREASED convenience
- Direct PARTICIPATION of constituents
- Reduction in OVERALl cost.
- EXPANDED REACH of government

TYPES OF E-GOVERNANCE :

Figure 1: Types of e-government transactions

GOVERNMENT-TO-CITIZEN (G2C)

- The Government-to-citizen refers to the government services which ENABLE citizens to get ACCESS to wide VARIETY of public services.
- Most of the government services FALL under G2C.
- It helps the ORDINARY people to reduce the time AND cost to conduct A TRANSACTION.

GOVERNMENT-TO-BUSINESS (G2B)

- The Government to business is the EXCHANGE of services between Government AND Business ORGANIZATIONS.
- G2B provides ACCESS to RELEVANT forms needed to comply.
- The G2B ALSO consists of MANY services EXCHANGED between business sectors AND government.

GOVERNMENT-TO-GOVERNMENT (G2G)

- The Government-to-Government refers to the INTERACtion between different government DEPARTMENTS, ORGANIZATIONS AND AGENCIES.
- In G2G, government AGENCIES CAN SHARE the SAME DATABASE using online COMMUNICATION.

GOVERNMENT-TO-EMPLOYEE (G2E)

- The Government-to-Employee is the internal part of G2G sector. Furthermore, G2E aims to bring employees together and improvise
- knowledge sharing. Similarly, G2E provides online facilities to the employees like applying for leave, reviewing salary payment record and checking the balance of holiday.

Security Measures in E-Commerce

- E-Commerce security refers to the principles which guide SAFE electronic TRANSACTIONS, ALLOWING the buying AND selling of goods AND services through the Internet.
- 1. **Encryption :**
- **2. Digital Signature :**
- **3. Digital Certificate :**

ENCRYPTION :

- Encryption is widely used on the internet to protect user INFORMATION being sent between A browser AND A SERVER. This includes PASSWORDS, PAYMENT INFORMATION AND other PERSONAL INFORMATION THAT should be considered PRIVATE.
- **Encryption is of two types-**
  - Symmetric

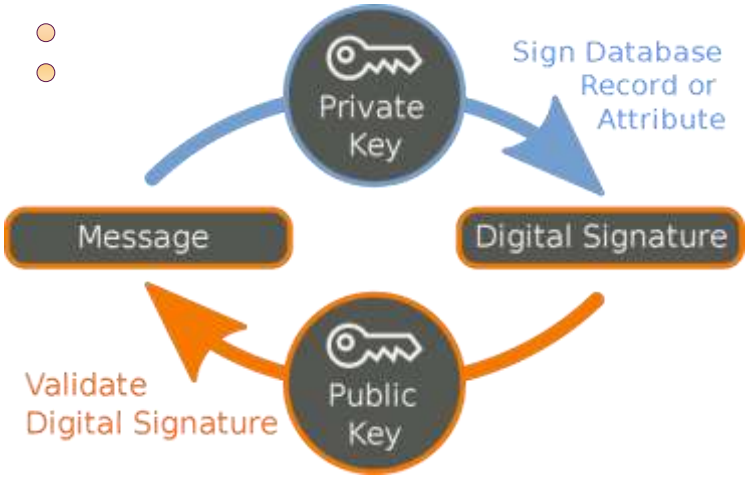
(SHARED Secret Encryption)

  - Asymmetric

(Public-Key Encryption)

Digital Signature :

- A digital signature is also known as an electronic signature. A digital signature guarantees the authenticity of an electronic document or message in digital communication and uses encryption technique (asymmetric cryptography) to provide proof of original and unmodified documentation.



Digital Certificate :

- A Digital Certificate is an electronic "password" that allows a person, organization to exchange data securely over the Internet using the public key infrastructure (PKI).
- Digital Certificate is also known as a public key certificate or identity certificate.