

ENGLISH

1.2

On Saying Please Alfred George Gardiner



Alfred George Gardiner (1865 to 1946) was born at Chelmsford in Essex in 1865. He started his literary career as a journalist. At the age of 37, he was appointed editor of the Daily News, London. Under the pseudonym (pen name) 'Alpha of the Plough', he made regular contributions to the Daily News, The Manchester Evening News etc. His essays are uniformly elegant, graceful and humorous. 'The Pillars of Society', 'Pebbles on the Shore', 'Many Furrows and Leaves in the Wind' are some of his best known writings. His uniqueness lies in his ability to teach the basic truths of life in an easy and amusing manner. He raised the question of morality in everyday life.



In, *On Saying "Please"*, he points out the value of good manners in social life and emphasizes the importance of courtesy and politeness in daily behaviour. He shows how polite speech and manner sweeten the atmosphere around and how discourtesy and ill manners spoil or pollute it.

On Saying "Please"

a lift-man is a person who
.....
.....

discourtesy : lack of courtesy, rudeness

assault and battery: an attack which includes not only threats but also the actual use of violence

retaliate : do something bad to someone who has done something bad to you

assailant : an attacker

legislate: make a law or laws

violence : action or feeling that causes damage, unrest etc.

to box : fight with the fists (closed hands)

haughty: having a high opinion of oneself and often a low opinion of others

The young lift-man in a City office who threw a passenger out of his lift the other morning and was fined for the offence was undoubtedly in the wrong. It was a question of "Please." The complainant entering the lift, said, "Top." The lift-man demanded "Top-please," and this concession being refused he not only declined to comply with the instruction, but hurled the passenger out of the lift. This, of course was carrying a comment on manner too far. **Discourtesy** is not a legal offence, and it does not excuse **assault and battery**. If a burglar breaks into my house and I knock him down, the law will acquit me, and if I am physically assaulted, it will permit me to **retaliate** with reasonable violence. It does this because the burglar and my **assailant** have broken quite definite commands of the law. But no legal system could attempt to **legislate** against bad manners, or could sanction the use of **violence** against something which it does not itself recognize as a legally punishable offence. And our sympathy with the lift-man, we must admit that the law is reasonable. It would never do if we were at liberty **to box** people's ears because we did not like their behaviour, or the tone of their voices, or the scowl on their faces. Our fists would never be idle, and the gutters of the city would run with blood all day.

I may be as uncivil as I may please and the law will protect me against violent retaliation. I may be **haughty**

or **boorish** and there is no penalty to pay except the penalty of being written down an ill-mannered fellow. The law does not compel me to say "Please" or to attune my voice to other people's sensibilities any more than it says that I shall not wax my moustache or dye my hair or wear ringlets down my back. It does not recognize the **laceration** of our feelings as a case for compensation. There is no allowance for moral and intellectual damages in these matters.

This does not mean that the damages are negligible. It is probable that the lift-man was much more acutely hurt by what he regarded as a slur upon his social standing than he would have been if he had a kick on the shins, for which he could have got a legal **redress**. The pain of a kick on the shins soon passes away but the pain of a wound to our self-respect or our **vanity** may poison a whole day. I can imagine that lift-man, denied the relief of throwing the author of his wound out of the lift, **brooding over** the insult by the hour, and visiting his wife in the evening as the only way of restoring his **equilibrium**. For there are few things more catching than bad temper and bad manners. When Sir Anthony Absolute **bullied** Captain Absolute, the latter went out and bullied his man, Fag, whereupon Fag went out downstairs and kicked the page-boy. Probably the man who said "Top" to the lift-man was really only getting back on his employer who had not said "Good morning" to him because he himself had been **henpecked** at breakfast by his wife, to whom the cook had been **insolent** because the housemaid had "answered her back". We infect the world with our ill-humours. Bad manners probably do more to poison the stream of the general life than all the crimes in the **calendar**. For one wife who gets a **black eye** from an otherwise good-natured husband there are a hundred who live a life of martyrdom under the shadow of a **morose** temper. But all the same the law cannot become the guardian of our private manners. No **Decalogue** could cover the vast area of offences and no court could administer a law which governed our social civilities, our speech, the tilt of our eyebrows and all our moods and manners.

But though we are bound to **endorse** the **verdict** against the lift-man, most people will have a certain

boorish: rude, uncultured

laceration: (here) a cut or tear

Guess the meaning :

• redress

Explain the sentence : The pain of a kick... poison a whole day.

vanity: pride

brooding over : thinking anxiously or sadly about something

equilibrium: balance

bullied: threatened

Sir Anthony Absolute... page boy : This amusing incident is described in Act III, Sc.1 of 'The Rivals' 1775, a comedy by Sheridan. Sir Anthony is Captain Jack Absolute's father, and Fag is the son's servant.

insolent: very rude

calendar: (here) a calendar of causes arranged for trial in court

Guess the meanings :

• henpecked

• black eye

• endorse

morose: unhappy

Decalogue: The Ten Commandments

Why is it not possible for the law to become the guardian of our private manners?

verdict: judgement

How can we keep the machine of life oiled and running sweetly?

intercourse:
communication,
conversation

resentment: anger

ordeal: difficult or painful experience

The public owes to the Underground Railway Company because

knave: a dishonest person
According to the conductor, what are the stale old tricks ?

sympathy with him. While it is true that there is no law that compels us to say "Please", there is a social practice much older and much more sacred than any law which enjoins us to be civil. And the first requirement of civility is that we should acknowledge a service. "Please" and "Thank you" are the small change with which we pay our ways as social beings. They are the little courtesies by which we keep the machine of life oiled and running sweetly. They put our **intercourse** upon the basis of a friendly co-operation, an easy give-and-take, instead of on the basis of superiors dictating to inferiors. It is a very vulgar mind that would wish to command where he can have the service for asking, and have it with willingness and good-feeling instead of **resentment**.

I should like to "feature" in this connection my friend, the polite conductor. By this discriminating title I do not intend to suggest a rebuke to conductors generally. On the contrary, I am disposed to think that there are few classes of men who come through the **ordeal** of a very trying calling better than bus conductors do. Here and there you will meet an unpleasant specimen who regards the passengers as his natural enemies - as creatures whose chief purpose on the bus is to cheat him, and who can only be kept reasonably honest by a loud voice and an aggressive manner. But this type is rare - rarer than it used to be. I fancy the public owes much to the Underground Railway Company, which also runs the buses, for insisting on a certain standard of civility in its servants and taking care that standard is observed. In doing this it not only makes things pleasant for the travelling public, but performs an important social service.

It is not, therefore, with any feeling of unfriendliness to conductors as a class that I pay a tribute to a particular member of that class. I first became conscious of his existence one day when I jumped on to a bus and found that I had left home without any money in my pocket. Everyone has had the experience and knows the feeling, the mixed feeling, which the discovery arouses. You are annoyed because you look like a fool at the best and like a **knave** at the worst. You would not be at all surprised if the conductor eyed you coldly as much as to say, "Yes, I know that stale old trick. Now then, off you get." And

even if the conductor is a good fellow and lets you down easily, you are faced with the necessity of going back, and the inconvenience, perhaps, of missing your train or your engagement.

Having searched my pockets in vain for stray **coppers**, and having found I was utterly penniless, I told the conductor with as honest a face as I could assume that I couldn't pay the fare, and must go back for money. "Oh you needn't get off: that's all right," said he. "All right," said I, "but I haven't a copper on me." "Oh, I'll book you through," he replied. "Where d'ye want to go?" and he handled his bundle of tickets with the air of a man who was prepared to give me a ticket for anywhere from the Bank to Hong Kong. I said it was very kind of him, and told him where I wanted to go, and as he gave me the ticket I said, "But where shall I send the fare?" "Oh, you'll see me some day all right," he said **cheerfully**, he turned to go. And then, luckily, my fingers, still wandering in the corner of my pockets lighted on a shilling and the account was **squared**. But that fact did not lessen the glow of pleasure which so good-natured an action had given me.

A few days after, my most sensitive toe was trampled on rather heavily as I sat reading on the top of a bus. I looked up with some anger and more agony, and saw my friend of the cheerful **countenance**. "Sorry, sir," he said. "I know these are heavy boots. Got 'em because my own feet get trod on so much, and now I'm **treading** on other people's. Hope I didn't hurt you, sir." He had hurt me but he was so nice about it that I **assured** him he hadn't. After this I began to observe him whenever I boarded his bus, and found a curious pleasure in the constant good-nature of his bearing. He seemed to have an **inexhaustible** fund of patience and a gift for making his passengers comfortable. I noticed that if it was raining he would run up the stairs to give someone the tip that there was "room inside". With old people he was as considerate as a son, and with children as **solicitous** as a father. He had evidently a peculiarly warm place in his heart for young people, and always indulged in some merry jest with them. If he had a blind man on board it was not enough to set him down safely on the pavement. He would call to Bill

coppers : coins of low value

cheerfully: happily

squared: settled

trampled on : crushed under feet

Guess the meanings :

- countenance
- treading
- assured

inexhaustible: unlimited

solicitous: caring or concerned

Which particular experience made the writer comfortable in a bus?

irradiated : (here) spread or produced

uncouth: impolite, unrefined

benediction: a blessing

conciliatory: trying to win friendly feelings

panegyric: a speech or piece of writing to praise someone highly

the poor leech-gatherer: the subject of Wordsworth's poem 'Resolution and Independence' or 'The Leech Gatherer'

lower than the angels: from Psalm 8:5-- 'Thou hast made him (man) a little lower than the angels, here, it means less than perfect

Guess the meaning :
• moral affront

in front to wait while he took him across the road or round the corner, or otherwise safely on his way. In short, I found that he **irradiated** such an atmosphere of good-temper and kindness that a journey with him was a lesson in natural courtesy and good manners.

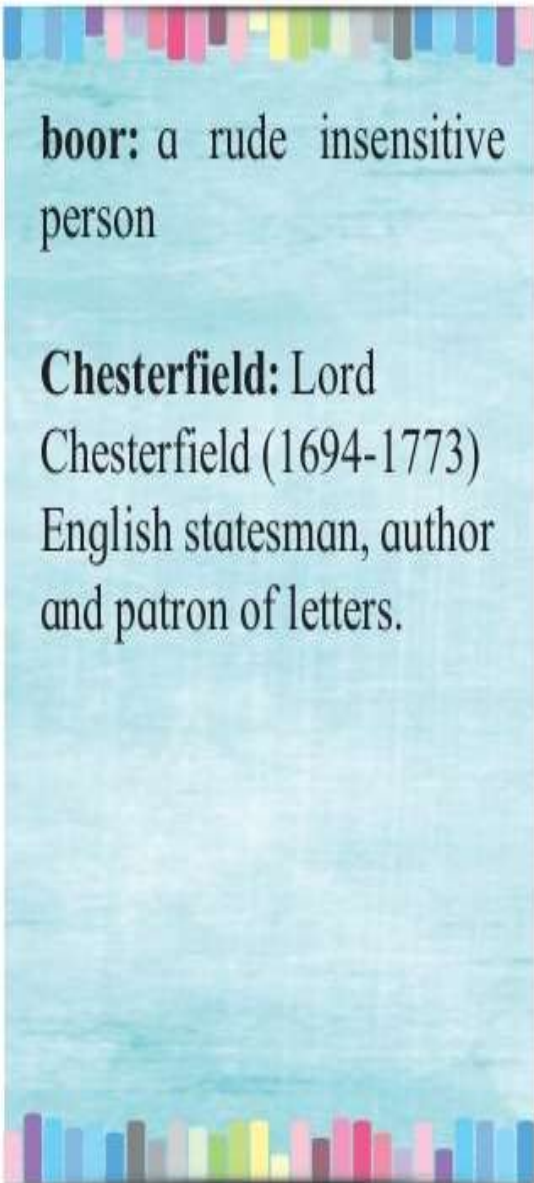
What struck me particularly was the ease with which he got through his work. If bad manners are infectious, so also are good manners. If we encounter incivility most of us are apt to become uncivil, but it is an unusually **uncouth** person who can be disagreeable with sunny people. It is with manners as with the weather. "Nothing clears up my spirits like a fine day," said Keats, and a cheerful person descends on even the gloomiest of us with something of the **benediction** of a fine day. And so it was always fine weather on the polite conductor's bus, and his own civility, his **conciliatory** address and good-humoured bearing, infected his passengers. In lightening their spirits he lightened his own task. His gaiety was not a wasteful luxury, but a sound investment.

I have missed him from my bus route of late; but I hope that only means that he has carried his sunshine on to another road. It cannot be too widely diffused in a rather drab world. And I make no apologies for writing a **panegyric** on an unknown bus conductor. If Wordsworth could gather lessons of wisdom from **the poor leech-gatherer** 'on the lonely moor', I see no reason why lesser people should not take lessons in conduct from one who shows how a very modest calling may be dignified by good-temper and kindly feeling.

It is a matter of general agreement that the war has had a chilling effect upon those little everyday civilities of behaviour that sweeten the general air. We must get those civilities back if we are to make life kindly and tolerable for each other. We cannot get them back by invoking the law. The policeman is a necessary symbol and the law is a necessary institution for a society that is still somewhat **lower than the angels**. But the law can only protect us against material attack. Nor will the lift-man's way of meeting **moral affront** by physical violence help us to restore the civilities. I suggest to him, that he would have had a more subtle and effective revenge if he had treated the gentleman who would not say "Please" with elaborate

politeness. He would have had the victory, not only over the **boor**, but over himself, and that is the victory that counts. The polite man may lose the material advantage, but he always has the spiritual victory. I commend to the lift-man a story of **Chesterfield**. In his time the London streets were without the pavements of today, and the man who “took the wall” had the driest footing. “I never give the wall to a scoundrel,” said a man who met Chesterfield one day in the street. “I always do,” said Chesterfield, stepping with a bow into the road. I hope the lift-man will agree that his revenge was much more sweet than if he had flung the fellow into the mud.

- Alfred George Gardiner



boor: a rude insensitive person

Chesterfield: Lord Chesterfield (1694-1773)
English statesman, author and patron of letters.

SUMMARY : This essay deals with little but socially important incident from our day to day life. It tells us about the great value of politeness and mannerism. The author points out that bad manners are anti social.

Though bad manners are not considered criminal in the eyes of the law, the society always look down upon the rude people. According to Gardiner, good manners and bad manners are really contagious. If bad manners of one person influence others and make them rude and ill tempered, good manners of one person also affect others and make them be polite and kind in turn.

The essay starts with an incident of a lift man in a City office who threw a passenger out of his lift because he didn't use the word "Please". He just said "Top" and not "Top-Please". The liftman was undoubtedly in the wrong and was fined for the offence. Discourtesy is not a legal offence and it does not excuse assault and battery (allow you to attack anyone). No legal system could attempt to legislate against bad manners and therefore, legally, it is not a punishable offence. Anyone maybe as uncivil as he may please and the law will protect him against violent retaliation. The law does not compel anyone to say "please". Here A G Gardiner says, "we infect the world with our ill humours. Bad manners probably do more to poison the stream of the general life than all the crimes in the calendar"

The words like “please” and “thank you” make us courteous by which we keep the machine of life oiled and running sweetly. If you command for anything, you will get the service in resentment but if you ask nicely(courteously), you will definitely get the service with willingness and good feeling.

Here, Gardiner also talks about a polite bus conductor who is the symbol of courteousness and mannerism. Once the narrator got into the bus and eventually came to know that he had no money to buy the tickets. The polite conductor didn't make him leave the bus but instead, he gave him the ticket. After that the narrator began to observe him whenever he boarded his bus. The conductor would always make his passengers comfortable with his patience and courteous behaviour. Particularly, the narrator was surprised with the ease with which the conductor got through his work.

In conclusion, Gardiner says that we must get the civilities if we want to make life kindly and tolerable for each other. The polite man may lose the material advantage, but he always has the spiritual victory.

ACTIVITIES :

Q1A. Read the extract and complete the activities given below.(12)

The young lift-man in

.....the City would run with blood all day.

(Textbook page no 14)

**A1.Rewrite and state whether the following sentences are true or false.
(2m)**

- i)The writer favours the step taken by the lift-man.**
- ii) Discourtesy is hardly a legal offence.**
- iii) According to the writer, the law is not unreasonable.**
- iv)The passanger said Top-please to the lift-man.**

A2. Describe the incident in the lift in about 50 words. (2)

A3.. Complete the following sentences with the help of given passage. (2)

I) If a burglar breaks into my house.....

iii) Our fists would never.....

A4. Personal Response : (2)

Write any four polite expressions you use in your day-to-day life.

A5. Do as directed : (2)

**i) We did not like their behaviour.
(Make it affirmative)**

**ii) I knocked him down.
(Change the Voice)**

A6. Vocabulary

(2)

Fill in the blanks with appropriate words given in the bracket and rewrite the sentences.

(reasonable, attempt, concession, sympathy)

- i) This would be the only ----- they would make.
- ii) It was a ----- measure to support the decision.
- iii) A man without -----in heart is like a stone.
- iv) The students' applied for the ----- in the fees.

Q1B. Language Study .

(4)

Do as directed. (3)

1. He drivesold car.. (Rewrite using correct article)

- i. a
- ii. an
- iii. the

2. They were sitting..... the tree. (Rewrite using correct preposition)

- i. under
- ii. over
- iii. In

**3. She said to me, "I am writing a letter to my brother."
(Change the given sentence into Indirect Speech and rewrite.)**

- i) She says that she is writing a letter to her brother.**
- ii) She told me that she was writing a letter to her brother**
- iii) She told me that she wrote a letter to my brother .**

4. Spot the error and rewrite . (1)

Rosy and Sarah is friends and they always plays together.

The image features a vibrant blue background densely populated with multi-colored confetti. The confetti consists of small, irregular shapes in shades of red, yellow, teal, and purple. Centered on this background is the text "Thank you" in a white, elegant script font. The word "Thank" is positioned on the top line, and "you" is on the bottom line. A long, white, curved underline starts beneath the "T" in "Thank" and sweeps across the space between the two words, ending under the "u" in "you".

Thank
you

ВК

2. Amalendu and Sameer share profits and losses in the ratio 3:2 respectively Their balance sheet as on 31st March 2017 was as under.

Balance Sheet as on 31st March, 2017

Liabilities	Amount (₹)	Assets	Amount (₹)
Sundry Creditors	10,000	Cash at bank	12,000
Amalendu capital	60,000	Sundry debtors	24,000
Sameer capital	40,000	Land & Building	50,000
General reserve	20,000	Stock	16,000
		Plant and machinery	20,000
		Furniture & fixture	8,000
	1,30,000		1,30,000

On 1st April 2017 they admit Paresh into partnership. The term being that:

- 1 He shall pay ₹ 16,000 as his share of Goodwill 50% amount of Goodwill shall be withdrawn by the old partners.

- 2 He shall have to bring in ₹ 20,000 as his Capital for $\frac{1}{4}$ share in future profits.
3. For the purpose of Paresh's admission it was agreed that the assets would be revalued as follows.
 - A) Land and Building is to be valued at ₹ 60,000
 - B) Plant and Machinery to be valued at ₹16,000
 - C) Stock valued at ₹ 20,000 and Furniture and Fixtures at ₹ 4,000
 - D) A Provision of 5% on Debtors would be made for Doubtful Debts.

Pass The necessary Journal Entries in the Books of a New Firm.

7. The balance sheet of Medha and Radha who share profit and loss in the ratio 3:1 is as follows :

Balance Sheet as on 31 March 2018

Liabilities	Amount (₹)	Assets	Amount (₹)
Sundry Creditors	80,000	Cash	78,000
Bills Payable	20,000	Sundry debtors	64,000
Bank overdraft	20,000	Stock	40,000
Capital A/c :		Plant & Machinery	60,000
Medha	1,20,000	Furniture	22,000
Radha	40,000	Land and Building	32,000
General reserve	16,000		
	2,96,000		2,96,000

They decided to admit krutika on 1st April 2018 on the following terms:

1. Krutika is taken as partner on 1st April 2017 she will pay 40,000 as her capital for $\frac{1}{5}$ share in future profits and ₹ 2,500 as goodwill
2. A 5% provision for bad and doubtful debt be created on debtors.
3. Furniture be depreciated by 20%.
4. Stocks be appreciated by 5% and plant & machinery by 20%
5. The Capital accounts of all partners be adjusted in their new profit sharing ratio by adjusting amount through loan.
6. The new profit sharing ratio will be $\frac{3}{5}$ $\frac{1}{5}$ $\frac{1}{5}$ respectively.

You are required to prepare profit and loss adjustment A/c, Partner's capital A/c, Balance Sheet of the new firm.

(Ans: Revaluation Loss 4,400, Current A/c Medha 10,575, Radha 3,525, Balance Sheet 3,34,100)

ECONOMICS

3 B ELASTICITY OF DEMAND



Topics to Discuss

- Introduction
- Meaning and Definition of Elasticity of demand
- Types of Elasticity of demand
- Types of Price Elasticity of demand
- Measurement of Price Elasticity of demand
- Factors determining Elasticity of demand
- Significance of Elasticity of demand

LAW OF DEMAND



PRICE FALLS

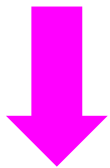


QUANTITY DEMANDED RISES

INVERSE RELATIONSHIP

HOW MUCH????

PRICE



RS 100

**QUANTITY
DEMANDED**

10 KG



20 KG



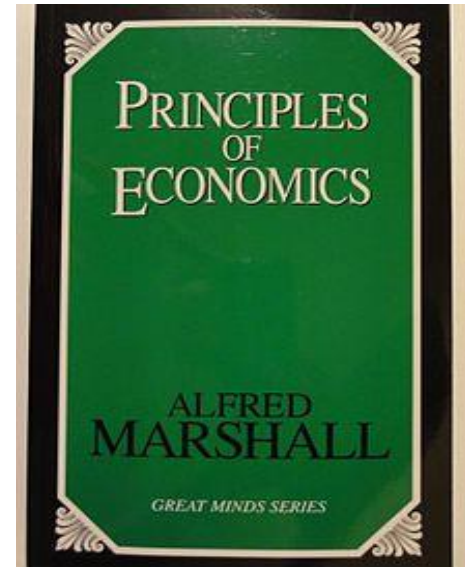
30KG



40KG



ELASTICITY OF DEMAND



PROF. ALFRED MARSHALL

MEANING OF ELASTICITY OF DEMAND

- The term elasticity indicates responsiveness of one variable to a change in the other variable.
- Elasticity of demand refers to the degree of responsiveness of quantity demanded to a change in its price or any other factor
- In other words, it is the ratio of percentage change in quantity demanded of a commodity to a percentage change in price.



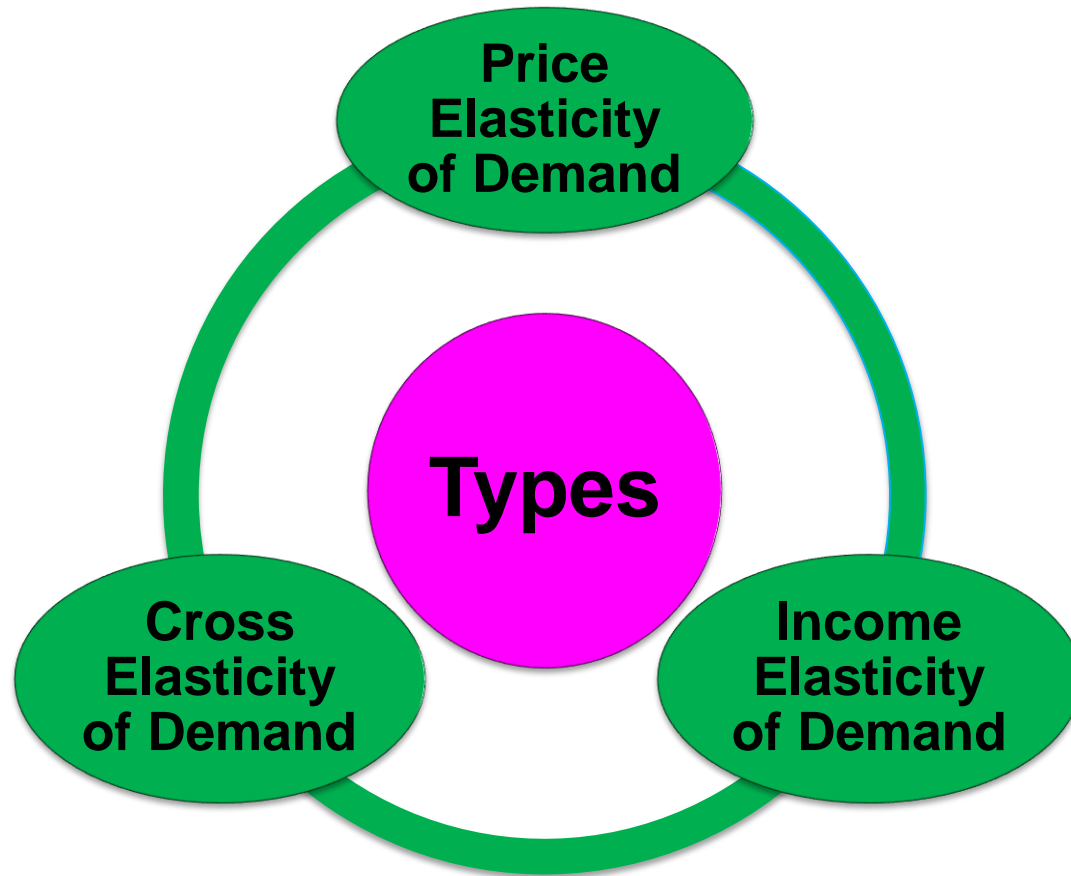
DEFINITION OF ELASTICITY OF DEMAND

According to Prof. Marshall,

“Elasticity of demand is great or small according to the amount demanded which rises much or little for a given fall in price and quantity demanded falls much or little for a given rise in price.”

It is clear from the above definition that elasticity of demand is a technical term which describes the responsiveness of change in quantity demanded to fall or rise in its price

TYPES OF ELASTICITY OF DEMAND



INCOME ELASTICITY OF DEMAND

It refers to the degree of responsiveness of a change in quantity demanded to a change in the income only, other factors including price remain unchanged.

It is expressed as :

$$E_y = \frac{\text{Percentage change in Qty. demanded}}{\text{Percentage change in Income}}$$

Symbolically,

$$\begin{aligned} E_y &= \frac{\% \Delta Q}{\% \Delta Y} \\ &= \frac{\Delta Q}{Q} \div \frac{\Delta Y}{Y} \\ &= \frac{\Delta Q}{Q} \times \frac{Y}{\Delta Y} \end{aligned}$$

Where,

Δ = Represents change

Q = Original demand

Y = Original income

ΔQ = Change in quantity demanded

ΔY = Change in income of a consumer

TYPES OF INCOME ELASTICITY OF DEMAND

	POSITIVE	NEGATIVE	ZERO
1	Demand increases with increase in income of the consumer	Demand decreases with increase in income of the consumer	Demand remain constant with increase in income of the consumer
2	Normal goods	Inferior goods or low quality goods	Necessary goods
3	E.g.- car, AC, sofa-set, rice, sugar, fruits etc.	E.g.- Nachini, dalda, bread, Potatoes etc.	E.g.- Salt ,medicines, brooms, comb, Newspaper etc.
4	Direct relationship	Inverse relationship	Not related

CROSS ELASTICITY OF DEMAND

It refers to a change in quantity demanded of one commodity due to a change in the price of other commodity. (Complementary goods or substitutes)

It is expressed as :

$$E_c = \frac{\text{Percentage change in Qty. demanded of A}}{\text{Percentage change in Price of B}}$$

Symbolically,

$$\begin{aligned} E_c &= \frac{\% \Delta Q_A}{\% \Delta P_B} \\ &= \frac{\Delta Q_A}{Q_A} \div \frac{\Delta P_B}{P_B} \\ &= \frac{\Delta Q_A}{Q_A} \times \frac{P_B}{\Delta P_B} \end{aligned}$$

Where,

Q_A = Original quantity demanded of commodity A

ΔQ_A = Change in quantity demanded of commodity A

P_B = Original price of commodity B

ΔP_B = Change in price of commodity B

TYPES OF CROSS ELASTICITY OF DEMAND

	POSITIVE	NEGATIVE	ZERO
1	Demand of one commodity increases due to increase in price of another commodity.	Demand of one commodity decreases due to increase in price of another commodity.	There is no relationship between both the commodities.
2	Substitute goods	Complimentary goods	Non-related goods
3	E.g.- Tea and coffee, Pears and dove Nike and adidas	E.g.- Bread and butter Tea and sugar Car and petrol	E.g.- Tea and books Chair and banana Car and rice
4	Direct relationship	Inverse relationship	Not related

ASSIGNMENT

- Q1) Explain Elasticity of demand.**
- Q2) Explain income and cross elasticity of demand**

THANK YOU

PRICE ELASTICITY OF DEMAND

NMFC

PRICE ELASTICITY OF DEMAND

According to Prof. Alfred Marshall,
Price elasticity of demand is a ratio of proportionate change in the quantity demanded of a commodity to a given proportionate change in its price.

It is expressed as :

$$Ed = \frac{\text{Percentage change in Quantity demanded}}{\text{Percentage change in price}}$$

Symbolically,

$$\begin{aligned} Ed &= \frac{\% \Delta Q}{\% \Delta P} \\ &= \frac{\Delta Q}{Q} \div \frac{\Delta P}{P} \\ &= \frac{\Delta Q}{Q} \times \frac{P}{\Delta P} \end{aligned}$$

Where,

Δ = Represents change

Q = Original demand

P = Original Price

ΔQ = Change in quantity demanded

ΔP = Change in Price

TYPES OF PRICE ELASTICITY OF DEMAND

**1) PERFECTLY
ELASTIC DEMAND**

**2) PERFECTLY
INELASTIC DEMAND**

**3) RELATIVELY
ELASTIC DEMAND**

**4) RELATIVELY
INELASTIC DEMAND**

**5) UNITARY
ELASTIC DEMAND**

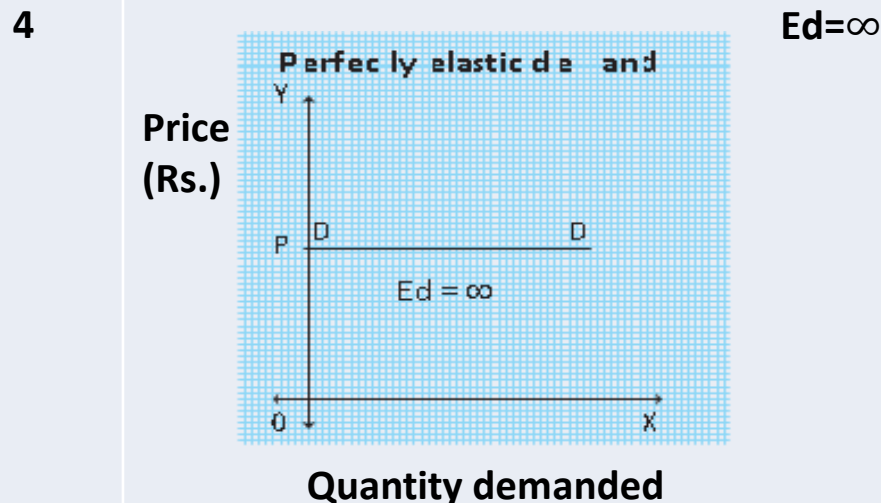
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Perfectly Elastic demand

1 When a slight or zero change in the price brings about an **infinite change** in the quantity demanded of that commodity, it is called perfectly elastic demand.

2 For example, 10% fall in price may lead to an infinite rise in demand.

3 $Ed = \frac{\% \Delta Q}{\% \Delta P}$, **$Ed = \infty$**



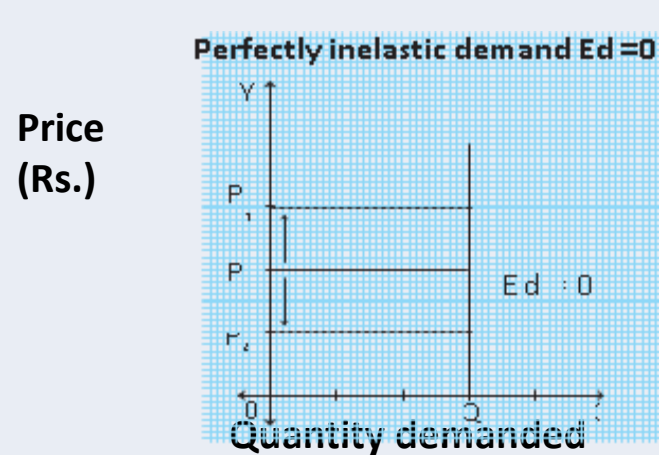
5 The demand curve is a **horizontal line** parallel to the X axis indicating perfectly elastic demand.

Perfectly inelastic demand

When a percentage change in price has **no effect** on the quantity demanded of a commodity it is called perfectly inelastic demand.

For example, 20% fall in price will have no effect on quantity demanded.

$Ed = \frac{\% \Delta Q}{\% \Delta P}$, $Ed = \frac{0}{20}$, **$Ed = 0$**



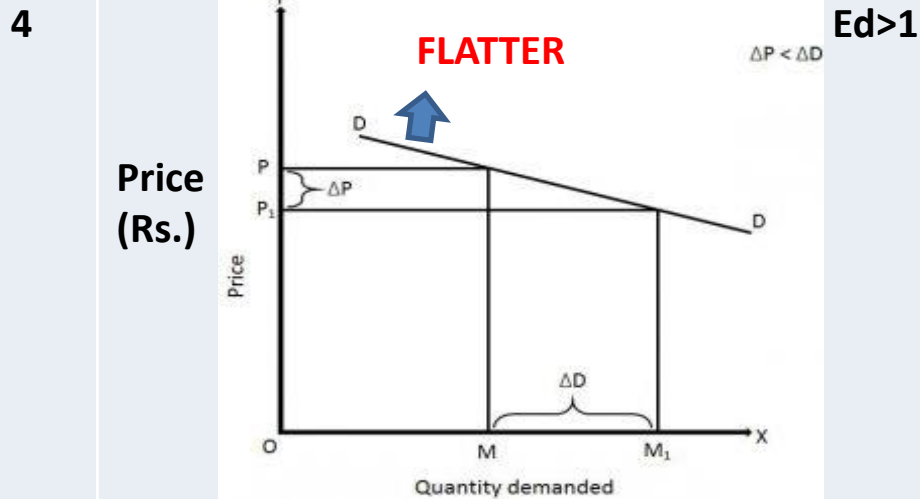
The demand curve is a **vertical straight line** parallel to the Y axis, indicating perfectly inelastic demand.

Relatively Elastic demand

1 When a percentage change in price leads to **more than** proportionate change in quantity demanded, the demand is said to be relatively elastic.

2 For example, 50% fall in price leads to 100% rise in quantity demanded

3
$$Ed = \frac{\% \Delta Q}{\% \Delta P}, Ed = \frac{100}{50}, Ed = 2 > 1, \text{Ed} > 1$$

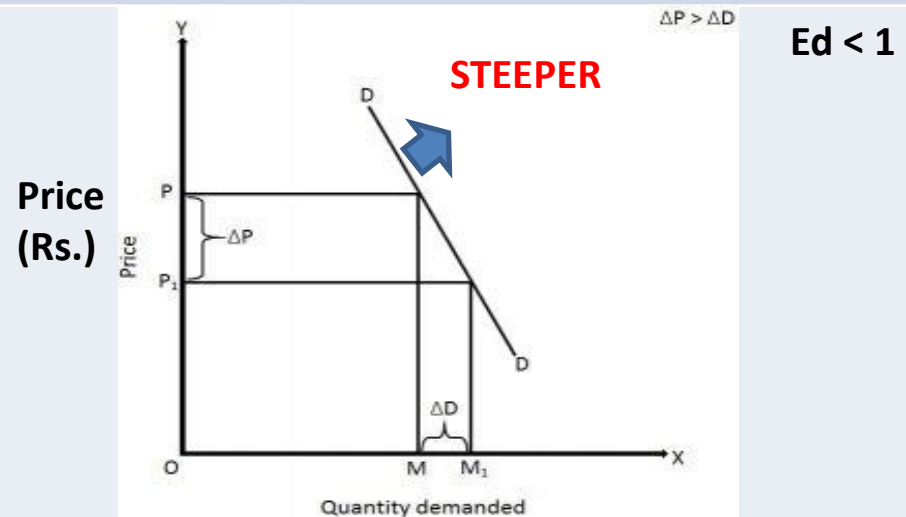


Relatively inelastic demand

When a percentage change in price leads to **less than** proportionate change in the quantity demanded, demand is said to be relatively inelastic.

For example, 50% fall in price leads to 25% rise in quantity demanded.

$$Ed = \frac{\% \Delta Q}{\% \Delta P}, Ed = \frac{25}{50}, Ed = \frac{1}{2} < 1, \text{Ed} < 1$$



5 The demand curve has a **flatter** slope

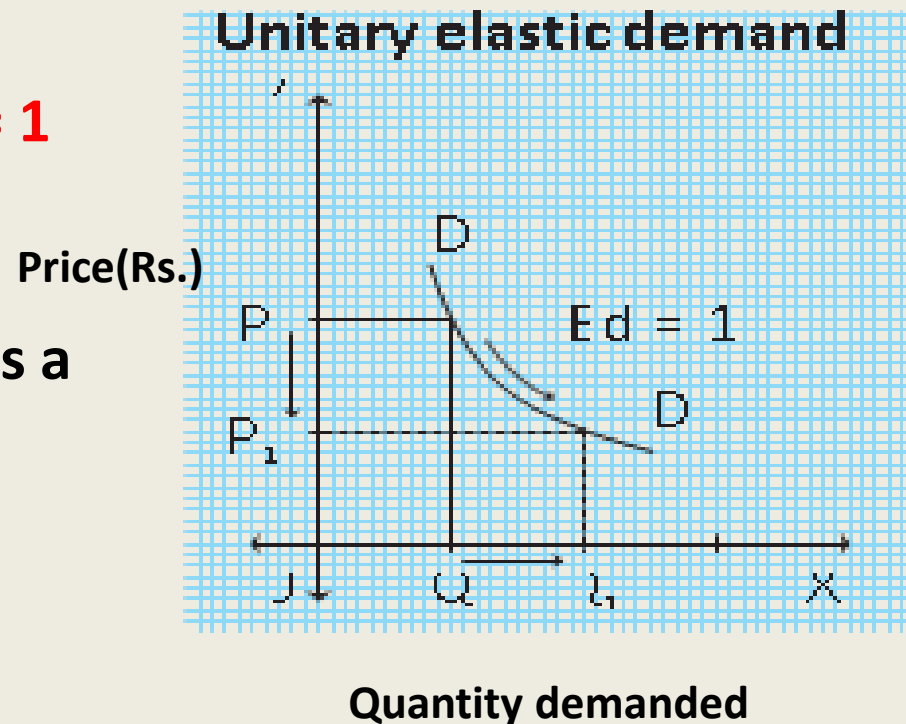
The demand curve has a **steeper** slope.

UNITARY ELASTIC DEMAND

- When a percentage change in price leads to a proportionate change in quantity demanded then demand is said to be unitary elastic.
- For example, 50% fall in price of a commodity leads to 50% rise in quantity demanded.

- $E_d = \frac{\% \Delta Q}{\% \Delta P}$, $E_d = \frac{50}{50}$, $E_d = 1$, **$E_d = 1$**

- The slope of the demand curve is a **'rectangular hyperbola'**.



Assignment

Q1) EXPLAIN TYPES OF PRICE ELASTICITY OF DEMAND.

Q2) DISTINGUISH BETWEEN

A . RELATIVELY ELASTIC DEMAND AND RELATIVELY INELASTIC DEMAND

B. PERFECTLY ELASTIC DEMAND AND PERFECTLY INELASTIC DEMAND

Q3.	Sr. No.	Degree of elasticity of demand	Types of elasticity of demand	Description Percentage	
	1		Perfectly inelastic	Change in price does not affect demand at all.	
	2	$E_d = 1$		Change in demand is equal to change in price	
	3	$E_d > 1$	Relatively elastic		
	4		Relatively inelastic	Change in demand is less than change in price	
	5	$E_d = \infty$		Slight change in price brings infinite change in demand.	

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CH6 SOCIAL RESPONSIBILITIES OF BUSINESS.

SOCIAL RESPONSIBILITY TOWARDS PROTECTION OF ENVIRONMENT

NMFC
- OCM DEPARTMENT

SOCIAL RESPONSIBILITY TOWARDS PROTECTION OF ENVIRONMENT :

- Business should be committed to protect and promote environment. Business uses all types of resources from nature, so it is an obligation to protect the environment. It should not create imbalance in nature.



SOCIAL RESPONSIBILITY TOWARDS PROTECTION OF ENVIRONMENT :

Business



- Extraction of raw materials
- Improper Management of resources.
- Generation of waste and by-products



Influence on Environment

Industrialisation results in environmental pollution by generating hazardous waste and has increased the risks to environment. Environmental issues like loss of bio-diversity release of genetically modified organisms are the main issues.

SOCIAL RESPONSIBILITY TOWARDS PROTECTION OF ENVIRONMENT :

- Effect of Business on Environment

- 1) Air Pollution
- 2) Water Pollution
- 3) Sound Pollution
- 4) Electronic Garbage

Protection of environment benefits business from many angles such as creating awareness among customers, employees, saving costs, loss govt. control etc.



SOCIAL RESPONSIBILITY TOWARDS PROTECTION OF ENVIRONMENT :

- The number of waste prevention techniques are available and they are commonly summarized as the so called 4 'R's. reduction, reuse, recycling and recovery.
- 1) Wherever possible waste reduction is the preferable option.
 - 2) If waste is produced then every effort should be made to reuse it if practicable.
 - 3) Recycling is the third option. Recycling should only be considered for waste which can not be reduced or reused.
 - 4) Finally, it may be possible to recover materials or energy from waste which cannot be reduced, reused or recycled.



THE END.



NMFC
OCM Dept

CORPORATE SOCIAL RESPONSIBILITY

INTRODUCTION:

Corporate Social Responsibility is not a new concept in India, however, the Ministry of Corporate Affairs, Government of India has recently notified the Section 135 of the Companies Act, 2013 along with Companies (Corporate Social Responsibility Policy) Rules, 2014 and other notifications related thereto which makes it mandatory from 15 April, 2014 for certain companies who fulfill the criteria as mentioned under Section 135 to comply with the provisions relevant to CSR.



CORPORATE SOCIAL RESPONSIBILITY

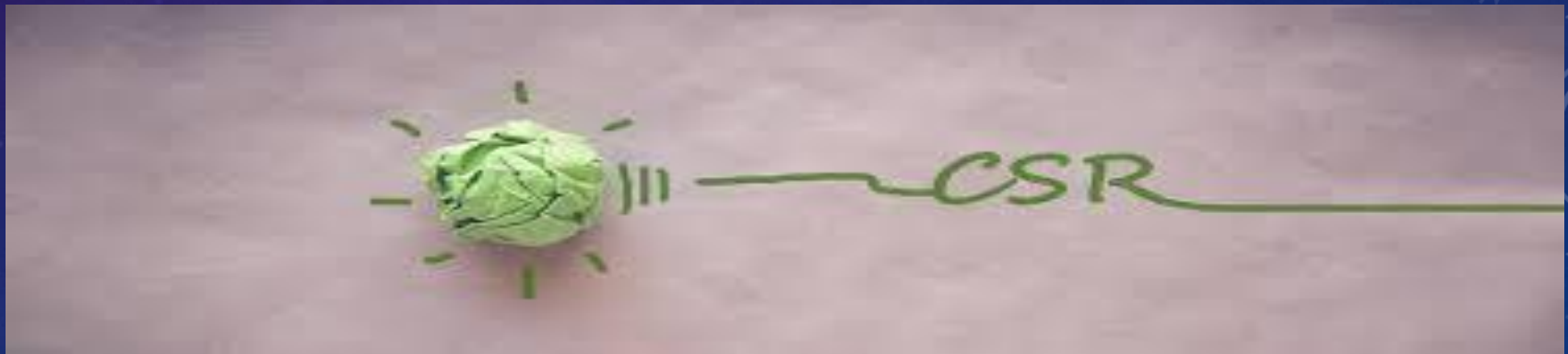
Meaning

- Corporate Social Responsibility (CSR) is self-regulating business model, aims to contribute to societal goals or support volunteering or ethically-oriented practices
- It makes a company socially responsible and accountable.
- This accountability is towards itself, its stakeholders, public in general etc.
- By practicing social responsibility, companies can be conscious about economic, social and environmental aspects of the society.

CORPORATE SOCIAL RESPONSIBILITY

Definitions:

- According to UNIDO (United Nations Industrial Development Organization), "Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders"



CORPORATE SOCIAL RESPONSIBILITY

Scope of CSR:

A) Applicability of CSR:

- 1) The companies having Net worth of 1500 Cr. or more or Turnover of 1000 Cr. or more; or Net Profit of 15 Cr. or more during any financial year shall be required to constitute a Corporate Social Responsibility Committee of the Board with effect from 1st April, 2014
- 2) The Board's report shall disclose the compositions of the CSR Committee.
- 3) All companies shall spend, in every financial year, at least 2% of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility Policy.

For your information:

New Delhi, March 23 (IANS) The government has decided to include corporates' spending on checking coronavirus as part of the Corporate Social Responsibility.

In a circular issued by the Ministry of Corporate Affairs, said that corporate spending for various activities related to Covid-19 including promotion of healthcare, preventive healthcare, sanitation, disaster management would qualify for treatment as CSR.

CORPORATE SOCIAL RESPONSIBILITY

Scope of CSR:

- 4) The companies shall be required to incorporate in its Board's report, an annual report on CSR containing the following particulars:
- A brief outline of the company's CSR Policy, including overview of projects or programs proposed to be undertaken and a reference to the web-link to the CSR policy and projects or programs
 - The composition of the CSR Committee;
 - Average net profit of the company for last three financial years;
 - Prescribed CSR Expenditure;
 - Details of money spent on CSR during the financial year;
 - In case the company has failed to spend the 2% of the average net profit of the last three financial year, reasons thereof;

CORPORATE SOCIAL RESPONSIBILITY

Scope of CSR:

CSR Committee:

- The CSR Committee will consist of four Directors, who shall meet at least twice in a year to discuss and review the CSR activities and policy.
- The CSR committee will recommend a formal CSR Policy and will recommend particular CSR activities, prepares a budget, describe how the company will implement the project, and establish a transparent means to monitor progress.

CORPORATE SOCIAL RESPONSIBILITY

CSR Activities:

- The Policy recognizes that corporate social responsibility is a commitment to support initiatives that measurably improve the lives of underprivileged by one or more of the following focus areas as notified under Section 135 of the Companies Act 2013 and Companies (Corporate Social Responsibility Policy) Rules 2014:
- Eradicating hunger, poverty & malnutrition, promoting preventive health care & sanitation & making available safe drinking water.
- Reducing child mortality and improving maternal health by providing good hospital facilities and low cost medicines.
- Ensuring environmental sustainability, ecological balance, protection of flora & fauna, animal welfare, Agro forestry, conservation of natural resources & maintaining quality of soil, air & water.

CORPORATE SOCIAL RESPONSIBILITY

CSR Activities:

- Employment enhancing vocational skills.
- Measures for the benefit of armed forces veterans, war widows & their dependents.
- Training to promote rural sports, nationally recognized sports.
- Contribution to the Prime Minister's National Relief Fund or any other fund set up by the Central Government for social-economic development & relief & welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities & women.
- Rural development projects etc
- Slum area development.

CORPORATE SOCIAL RESPONSIBILITY

Allocation of Funds:

- The Company would spend not less than 2% of the average Net Profits of the Company made during the three immediately preceding financial years.
- The surplus arising out of the CSR activity will not be a part of business profits of the Company.
- The Company may build CSR capacities of its personnel and/or those of its implementing agencies through Institutions with established track records of at least three financial years.

CORPORATE SOCIAL RESPONSIBILITY

Non-compliance of CSR activities:

- There is no specific penal provision for non-compliance under section 135 of the Act. However, non-disclosure or absence of the details about the CSR policy and its implementation in the Boards' report would attract penalties. Penalties for non-complying the duty of CSR would attract a fine of not less than Rs.50,000 which may extend to Rs. 25,00,000 and every officer of the company in default shall be punishable with imprisonment for a term which may extend to 3 years; or with fine which shall not be less than R 50,000 which may extend to Rs. 5,00,000 or with both.

SP

CHAPTER 01: INTRODUCTION TO CORPORATE FINANCE

A. Answer the following : (08 marks)

1. Discuss the importance of corporate finance
2. Discuss the factors determining working capital requirement

B. Answer in brief: (04 marks)

1. State any 4 factors affecting fixed capital requirements.
2. What is corporate finance? State any 2 decisions for basis of corporate finance.

C. Distinguish between

1. Fixed capital & Working capital.

Discuss the importance of corporate finance

- **INTRODUCTION:** The term FINANCE is related to money management. It is related to inflow & outflow of money. The success of any organization depends upon the efficiency with which it is able to generate & use funds.
- **MEANING :** Corporate finance deals with the raising & using of finance by a corporation. It deals with financing the activities of the corporation, capital structure & making investment decisions.
- **DEFINITION : HENRY HOAGLAND** defines corporate finance as –
“ Corporate finance deals primarily with the acquisition and use of capital by business corporation”

IMPORTANCE OF CORPORATE FINANCE

1. **HELPS IN DECISION MAKING**: All the important decisions of a business are taken on the basis of availability of funds. There may be a number of alternatives, but the management has to select the best one that will enhance profitability. Green signal to any project is given only if it is financially viable.
2. **HELPS IN RAISING CAPITAL**: Any new venture in the business requires funds. Capital can be raised by issuing shares, debentures, bonds or by taking loan
3. **HELPS IN RESEARCH & DEVELOPMENT**: R&D is required along with detailed technical work for successful execution of the project. It is a long process which requires financial support. Many a times the company has to upgrade its old product or develop new one for which survey, market analysis is required.
4. **BRINGS COORDINATION**: Corporate finance plays an important role in control and coordination of all activities. For ex. If adequate finance is not given to the production unit, it will affect the sales and eventually the profits of the company.

IMPORTANCE OF CORPORATE FINANCE

5. **PROMOTES EXPANSSION & DIVERSIFICATION**: Corporate finance provides for purchase of modern machines & technologies. Therefore finance becomes important for expansion & diversification
6. **MANAGING RISKS**: Company has to manage several risks, such as sudden fall in sales, loss due to natural calamity, loss due to strike etc. company needs financial help to manage such risks
7. **PAYMENT OF DIVIDEND & INTEREST**: Finance is needed to pay dividend to share holders and interest to creditors and bank
8. **PAYMENT OF TAXES/ FEES**: Company has to pay taxes to Government such as corporate tax GST & Fees to ROC on various occasions. Finance is needed for paying these taxes and fees.

Distinguish between Fixed Capital & Working Capital

Points	Fixed capital	Working capital
1) Meaning	Fixed capital refers to any kind of physical asset i.e. fixed assets.	Working capital refers to the <u>sum of current assets</u> .
2) Nature	Fixed capital stays in the business almost permanently.	Working capital is <u>circulating capital</u> .
3) Purpose	It is invested in fixed assets e.g. land, building, equipment, etc.	Working capital is invested in <u>short term assets</u> e.g. cash, account receivable, inventory, etc.
4) Sources	Fixed capital comes from selling shares, debentures, bonds, long term loans, etc.	Working capital comes from <u>short term loans, deposits, trade credit</u> , etc.
5) Objectives of Investors	Investors invest money in fixed capital to make future profit.	Investors invest money in working capital for <u>immediate returns</u> .
6) Risk	Investment in fixed capital is more risky.	Investment in working capital is <u>less risky</u> .

DISCUSS THE FACTORS DETERMINING WORKING CAPITAL REQUIREMENT

- **INTRODUCTION** – Working capital is the capital which is used to carry out the day to day business activities, cash is required to pay the overheads. The overheads include the expenses such as advertising, insurance, interest payments, rent, telephone bills, taxes, travel expenses, wages, electricity bills etc.
- **DEFINITION** – Gerstenbergh, defines WORKING CAPITAL as, “the excess of current assets over current liabilities.” this means – $\text{CURRENT ASSETS} - \text{CURRENT LIABILITIES} = \text{WORKING CAPITAL}$.
 - **FACTORS AFFECTING WORKING CAPITAL REQUIREMENT**
 1. **Nature of business** – Those firms who are engaged in manufacturing essential products, would need less working capital as there is constant and sufficient cash inflow whereas firms who are engaged in manufacturing luxurious products etc. need huge amount of working capital as the demand of such products is seasonal.
 2. **Size of business** – The firms with large scale of operations will require more working capital.
 3. **Volume of sales** – If the volume of sales increases the amount of working capital required will also increase & vice a versa

DISCUSS THE FACTORS DETERMINING WORKING CAPITAL REQUIREMENT

4. **Production cycle** – The process of converting raw material in to finished goods is known as Production cycle. If the period of production cycle is longer, the firm will need more working capital.
5. **Business cycle** – When there is boom in the economy, sales will increase. This will lead to increase in investment in stock, requiring more working capital.
6. **Growth & expansion** – The working capital requirement of a firm will increase with growth as the production and sales would increase.
7. **Proper coordination** – If there is proper coordination between production and distribution of goods it will lead to efficient use of available capital and hence will require less working capital.
8. **External factors** – If the financial institutions and banks provide funds to the firm, the need of working capital is reduced.

What is corporate finance? State any 2 decisions for basis of corporate finance (04 marks.)

- **MEANING :** Corporate finance deals with the raising & using of finance by a corporation. It deals with financing the activities of the corporation, capital structure & making investment decisions.
- **DEFINITION : HENRY HOAGLAND defines corporate finance as –**
“Corporate finance deals primarily with the acquisition and use of capital by business corporation”

The following two decisions are the basis of corporate finance.

1. **Financing decision :** the business firm can raise capital from the market. The firm has multiple choices, it can raise equity capital or debt capital. The firm can even opt for bank loan, public deposits or debentures to raise funds. The finance manager ensures that the firm has the right amount of capital and the right combination of debt and equity funds
2. **Investment decisions :** once the capital is raised, the finance manager has to take the decision regarding the use of the funds in a systematic manner to get maximum returns.

State any 4 factors affecting fixed capital requirements.

1. Nature of business – manufacturing units and public utilities have to invest more in fixed assets hence they need more amount of fixed capital
2. Size of business – when the business firm is set up to carry large scale sales operations, huge fixed capital is required because it would need to invest in production.
3. Extent of lease or rent – if the businessman decides to obtain assets on lease or rent, less amount of funds will be needed to purchase fixed assets.
4. Population trend – when the population is increasing at high rate, certain manufacturers find this as an opportunity to expand business. For ex, automobile, electronic goods readymade garments etc. which necessitates huge amount of fixed capital.

MATHS



TEXTUAL EXERCISE 5.1

Find the Price Index Number using Simple Aggregate Method in each of the following examples.

Q.1. Use 1995 as base year in the following problem.

Commodity	P	Q	R	S	T
Price (in ₹) in 1995	15	20	24	22	28
Price (in ₹)in 2000	27	38	32	40	45

Sol.:

Commodity	Price (₹) p_0 in 1995	Price (₹) p_1 in 2000
P	15	27
Q	20	38
R	24	32
S	22	40
T	28	45
	$\Sigma p_0 = 109$	$\Sigma p_1 = 182$

$$\begin{aligned} p_{01} &= \frac{\sum p_1}{\sum p_0} \times 100 \\ &= \frac{182}{109} \times 100 \\ &= 166.97 \end{aligned}$$

Q.2. Use 1995 as base year in the following problem.

Commodity	A	B	C	D	E
Price (in ₹) in 1995	42	30	54	70	120
Price (in ₹)in 2005	60	55	74	110	140

Sol.:

Commodity	Price (₹) in 1995 p_0	Price (₹) in 2005 p_1
A	42	60
B	30	55
C	54	74
D	70	110
E	120	140
	$\Sigma p_0 = 316$	$\Sigma p_1 = 439$

$$\begin{aligned}
 p &= \frac{\sum p_1}{\sum p_0} \times 100 \\
 &= \frac{439}{316} \times 100 \\
 &= 138.92
 \end{aligned}$$

Q.3.

Commodity	Unit	Base Year Price (in ₹)	Current Year Price (in ₹)
Wheat	Kg	28	36
Rice	Kg	40	56
Milk	litre	35	45
Clothing	Meter	82	104
Fuel	litre	58	72

Sol.:

Commodity	Unit	Base Year Price (₹) p_0	Current Year Price (₹) p_1
Wheat	Kg	28	36
Rice	Kg	40	56
Milk	litre	35	45
Clothing	Meter	82	104
Fuel	litre	58	72
		$\Sigma p_0 = 243$	$\Sigma p_1 = 313$

$$\begin{aligned}
 p_{01} &= \frac{\sum p_1}{\sum p_0} \times 100 \\
 &= \frac{313}{243} \times 100 \\
 &= 128.81
 \end{aligned}$$

Q.4. Use 2000 as base year in the following problem.

Commodity	Price (in ₹) for year 2000	Price (in ₹) for year 2006
Watch	900	1475
Shoes	1760	2300
Sunglasses	600	1040
Mobile	4500	8500

Sol.:

Commodity	Price (₹) in 2000 p_0	Price (₹) in 2006 p_1
Watch	900	1475
Shoes	1760	2300
Sunglasses	600	1040
Mobile	4500	8500
	$\Sigma p_0 = 7760$	$\Sigma p_1 = 13315$

$$\begin{aligned}
 p_{01} &= \frac{\sum p_1}{\sum p_0} \times 100 \\
 &= \frac{13315}{7760} \times 100 \\
 &= 171.59
 \end{aligned}$$

Q.5. Use 1990 as base year in the following problem.

Commodity	Unit	Price (in ₹) for 1990	Price (in ₹) for 1997
Butter	Kg	27	33
Cheese	Kg	30	36
Milk	litre	25	29
Bread	Loaf	10	14
Eggs	doz	24	36
Ghee	tin	250	320

Sol.:

Commodity	Unit	Price (in ₹) for 1990 p_0	Price (in ₹) for 1997 p_1
Butter	Kg	27	33
Cheese	Kg	30	36
Milk	litre	25	29
Bread	Loaf	10	14
Eggs	doz	24	36
Ghee	tin	250	320
		$\Sigma p_0 = 366$	$\Sigma p_1 = 468$

$$\begin{aligned}
 P_{01} &= \frac{\sum P_1}{\sum P_0} \times 100 \\
 &= \frac{468}{366} \times 100 \\
 &= 127.87
 \end{aligned}$$

Q.6. Assume 2000 to be base year in the following problem.

Fruit	Unit	Price (₹) in 2000	Price (₹) in 2007
Mango	doz	250	300
Banana	doz	12	24
Apple	Kg	80	110
Peach	Kg	75	90
Orange	doz	36	65
Sweet Lime	doz	30	45

Sol.:

Fruit	Unit	Price (₹) in 2000 P_0	Price (₹) in 2007 P_1
Mango	doz	250	300
Banana	doz	12	24
Apple	Kg	80	110
Peach	Kg	75	90
Orange	doz	36	65
Sweet Lime	doz	30	45
		$\sum P_0 = 483$	$\sum P_1 = 634$

$$\begin{aligned}
 P_{01} &= \frac{\sum P_1}{\sum P_0} \times 100 \\
 &= \frac{634}{483} \times 100 \\
 &= 131.26
 \end{aligned}$$

Q.7. Use 2005 as year in the following problem.

Vegetable	Unit	Price (₹) in 2005	Price (₹) in 2012
Ladies Finger	kg	32	38
Capsicum	kg	30	36
Brinjal	kg	40	60
Tomato	kg	40	62
Potato	kg	16	28

Sol.:

Vegetable	Unit	Price (₹) in 2005 P_0	Price (₹) in 2012 P_1
Ladies Finger	kg	32	38
Capsicum	kg	30	36
Brinjal	kg	40	60
Tomato	kg	40	62
Potato	kg	16	28
		$\sum P_0 = 158$	$\sum P_1 = 224$

$$\begin{aligned}
 P_{01} &= \frac{\sum P_1}{\sum P_0} \times 100 \\
 &= \frac{224}{158} \times 100 \\
 &= 141.77
 \end{aligned}$$

Find the Quantity Index Number using Simple Aggregate Method in each of the following examples.

Q.8.

Commodity	I	II	III	IV	V
Base Year Quantities	140	120	100	200	225
Current Year Quantities	100	80	70	150	185

Sol.:

Commodity	Base Year Quantities q_0	Current Year Quantities q_1
I	140	100
II	120	80
III	100	70
IV	200	150
V	225	185
	$\sum q_0 = 785$	$\sum q_1 = 585$

$$\begin{aligned}
 q_{01} &= \frac{\sum q_1}{\sum q_0} \times 100 \\
 &= \frac{585}{785} \times 100 \\
 &= 74.52
 \end{aligned}$$

Q.9.

Commodity	A	B	C	D	E
Base Year Quantities	360	280	340	160	260
Current Year Quantities	400	320	470	210	300

Sol.:

Commodity	Base Year Quantities q_0	Current Year Quantities q_1
A	360	440
B	280	320
C	340	470
D	160	210
E	260	300
	$\Sigma q_0 = 1400$	$\Sigma q_1 = 1740$

$$q_{01} = \frac{\sum q_1}{\sum q_0} \times 100$$

$$= \frac{1740}{1400} \times 100$$

$$= 124.29$$

Find the value Index Number using Simple Aggregate Method in each of the following examples.

Q.10.

Commodity	Base year		Current year	
	Price	Quantity	Price	Quantity
A	30	22	40	18
B	40	16	60	12
C	10	38	15	24
D	50	12	60	16
E	20	28	25	36

Sol.:

Commodity	p_0	q_0	p_1	q_1	p_0q_0	p_1q_1
A	30	22	40	18	660	720
B	40	16	60	12	640	720
C	10	38	15	24	380	360
D	50	12	60	16	600	960
E	20	28	25	36	560	900
					2840	3660

$$\Sigma p_0q_0 = 2540, \quad \Sigma p_1q_1 = 3660$$

$$V_{01} = \frac{\sum p_1q_1}{\sum p_0q_0} \times 100$$

$$= \frac{3660}{2840} \times 100$$

$$= 128.87$$

Q.11.

Commodity	Base year		Current year	
	Price	Quantity	price	Quantity
A	50	22	70	14
B	70	16	90	22
C	60	18	105	14
D	120	12	140	15
E	100	22	155	28

Sol.:

Commodity	p_0	q_0	p_1	q_1	p_0q_0	p_1q_1
A	50	22	70	14	1100	980
B	70	16	90	22	1120	1980
C	60	18	105	14	1080	1470
D	120	12	140	15	1440	2100
E	100	22	155	28	2200	4340
					6940	10870

$$\Sigma p_0q_0 = 6940, \quad \Sigma p_1q_1 = 10870$$

$$V_{01} = \frac{\sum p_1q_1}{\sum p_0q_0} \times 100$$

$$= 156.63$$

Q.12. Find x if the Price Index Number by Simple Aggregate Method is 125

Commodity	P	Q	R	S	T
Base Year Price (in ₹)	8	12	16	22	18
Current Year Price (in ₹)	12	18	x	28	22

Sol.:

Commodity	p_0	p_1
P	8	12
Q	12	18
R	16	x
S	22	28
T	18	22
	76	$x + 80$

$$p_{01} = 125$$

$$\frac{\sum p_1}{\sum p_0} \times 100 = 125$$

$$\therefore \frac{(x + 80)}{76} \times 100 = 125$$

$$\therefore x + 80 = \frac{125 \times 76}{100}$$

$$\therefore x + 80 = 95$$

$$\therefore x = 95 - 80$$

$$\therefore x = 15$$

(13) Find y is the Price Index Number by Simple Aggregate Method is 120, taking 1995 as base year

Commodity	A	B	C	D
Price (in ₹) for 1995	95	y	80	35
Price (in ₹) for 2003	116	74	92	42

Sol.:

Commodity	p_0	p_1
A	95	116
B	y	74
C	80	92
D	35	42
	$y + 210$	324

$$\sum p_0 = y + 210 \quad \sum p_1 = 324$$

$$p_{01} = 120$$

$$\frac{\sum p_1}{\sum p_0} \times 100 = 120$$

$$\therefore \frac{324}{y + 210} \times 100 = 120$$

$$\therefore y + 210 = \frac{324 \times 100}{120}$$

$$\therefore y + 210 = 270$$

$$\therefore y = 270 - 210$$

$$\therefore y = 60$$



TEXTUAL EXERCISE 5.2

Calculate Laspeyre's, Paasche's, Dorbish-Bowely's and Marshall-Edgeworth's Price Index Numbers in Problems 1 and 2

Q.1.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	8	20	11	15
B	7	10	12	10
C	3	30	5	25
D	2	50	4	35

Sol.:

Commodity	p_0	q_0	p_1	q_1	p_0q_0	p_0q_1	p_1q_0	p_1q_1
A	8	20	11	15	160	120	220	165
B	7	10	12	10	70	70	120	120
C	3	30	5	25	90	75	150	125
D	2	50	4	35	100	70	200	140
					420	335	690	550

$$p_{01}(L) = \frac{\sum p_1 q_0}{\sum p_0 q_0} \times 100 = \frac{690}{420} \times 100 = 164.29$$

$$p_{01}(P) = \frac{\sum p_1 q_1}{\sum p_0 q_1} \times 100 = \frac{550}{335} \times 100 = 164.18$$

$$p_{01}(D - B) = \frac{p_{01}(L) + p_{01}(P)}{2} = \frac{164.29 + 164.18}{2} = 164.235$$

$$p_{01}(M - E) = \left[\frac{\sum p_1 q_0 + \sum p_1 q_1}{\sum p_0 q_0 + \sum p_0 q_1} \right] \times 100 = \frac{690 + 550}{420 + 335} \times 100 = 164.24$$

Q.2.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
I	10	9	20	8
II	20	5	30	4
III	30	7	50	5
IV	40	8	60	6

Sol.:

Commodity	P_0	q_0	P_1	q_1	P_1q_0	P_0q_0	P_1q_1	P_0q_1
I	10	9	20	8	180	90	160	80
II	20	5	30	4	150	100	120	80
III	30	7	50	5	350	210	250	150
IV	40	8	60	6	480	320	360	240
					1160	720	890	550

$$p_{01}(L) = \frac{\sum P_1q_0}{\sum P_0q_0} \times 100 = \frac{1160}{720} \times 100 = 161.11$$

$$p_{01}(P) = \frac{\sum P_1q_1}{\sum P_0q_1} \times 100 = \frac{890}{550} \times 100 = 161.82$$

$$p_{01}(D - B) = \frac{p_{01}(L) + p_{01}(P)}{2} = \frac{161.11 + 161.82}{2} = 161.47$$

$$p_{01}(M - E) = \frac{\sum P_1q_0 + \sum P_1q_1}{\sum P_0q_0 + \sum P_0q_1} \times 100 = \frac{1160 + 890}{720 + 550} \times 100 = 161.42$$

Calculate Walsh's Price Index Number in Problem 3 and 4

Q.3.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
L	4	16	3	19
M	6	16	8	14
N	8	8	7	32

Sol.:

Commodity	P_0	q_0	P_1	q_1	$\sqrt{q_0q_1}$	$P_1\sqrt{q_0q_1}$	$P_0\sqrt{q_0q_1}$
L	4	16	3	19	17.44	52.32	69.76
M	6	16	8	14	14.97	119.76	89.82
N	8	28	7	32	29.93	209.51	239.44
						381.59	399.02

$$p_{01}(W) = \frac{\sum P_1\sqrt{q_0q_1}}{\sum P_0\sqrt{q_0q_1}} \times 100 = \frac{381.59}{399.02} \times 100 = 95.63$$

Q.4.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
I	10	12	20	9
II	20	4	25	8
III	30	13	40	27
IV	60	29	75	36

Sol.:

Commodity	p_0	q_0	p_1	q_1	$\sqrt{q_0 q_1}$	$p_1 \sqrt{q_0 q_1}$	$p_0 \sqrt{q_0 q_1}$
I	10	12	20	9	10.39	207.8	103.9
II	20	4	25	8	5.66	141.5	113.2
III	30	13	40	27	18.74	749.6	562.2
IV	60	29	75	36	32.31	2423.25	1938.6
						3522.15	2717.9

$$p_{01}(W) = \frac{\sum p_1 \sqrt{q_0 q_1}}{\sum p_0 \sqrt{q_0 q_1}} \times 100 = \frac{3522.15}{2717.9} \times 100 = 129.59$$

☞ Note: Question asked was Walsh but answers given are $p_{01}(L)$, $p_{01}(P)$, $p_{01}(O - B)$, $p_{01}(M - E)$

Commodity	p_0	q_0	p_1	q_1	$p_0 q_0$	$p_0 q_1$	$p_1 q_0$	$p_1 q_1$
I	10	12	20	9	120	90	240	180
II	20	4	25	8	80	160	100	200
III	30	13	40	27	390	810	520	1080
IV	60	29	75	36	174	216	2175	2700
					2330	3220	3035	4160

$$p_{01}(L) = \frac{\sum p_1 q_0}{\sum p_0 q_0} \times 100 = \frac{3035}{2330} \times 100 = 130.26$$

$$p_{01}(P) = \frac{\sum p_1 q_1}{\sum p_0 q_1} \times 100 = \frac{4160}{3220} \times 100 = 129.20$$

$$\begin{aligned} p_{01}(D - B) &= \frac{p_{01}(L) + p_{01}(P)}{2} \\ &= \frac{397.25 + 326.02}{2} \\ &= 129.73 \end{aligned}$$

$$\begin{aligned} p_{01}(M - E) &= \frac{\sum p_1 q_0 + \sum p_1 q_1}{\sum p_0 q_0 + \sum p_0 q_1} \times 100 \\ &= \frac{3035 + 4160}{2230 + 3220} \times 100 \\ &= 129.64 \end{aligned}$$

Q.5. If $p_{01}(L) = 90$, and $p_{01}(P) = 40$, find $p_{01}(D - B)$ and $p_{01}(F)$

Sol.:

$$p_{01}(L) = 90 \quad p_{01}(P) = 40$$

$$\begin{aligned} p_{01}(D - B) &= \frac{p_{01}(L) + p_{01}(P)}{2} \\ &= \frac{90 + 40}{2} \\ &= 65 \end{aligned}$$

$$\begin{aligned} p_{01}(F) &= \sqrt{p_{01}(L) \times p_{01}(P)} \\ &= \sqrt{90 \times 40} \\ &= 60 \end{aligned}$$

Q.6. If $\sum p_0 q_0 = 140$, $\sum p_0 q_1 = 200$, $\sum p_1 q_0 = 350$, $\sum p_1 q_1 = 460$, find Laspeyre's Paasche's Dorbish-Bowley's and Marshall-Edgeworth's Price Index Numbers.

Sol.:

$$\sum p_0 q_0 = 140, \sum p_0 q_1 = 200, \sum p_1 q_0 = 350, \sum p_1 q_1 = 460$$

$$p_{01}(L) = \frac{\sum p_1 q_0}{\sum p_0 q_0} \times 100 = \frac{350}{140} \times 100 = 250$$

$$p_{01}(P) = \frac{\sum p_1 q_1}{\sum p_0 q_1} \times 100 = \frac{460}{200} \times 100 = 230$$

$$\begin{aligned} p_{01}(D - B) &= \frac{p_{01}(L) + p_{01}(P)}{2} \\ &= \frac{250 + 230}{2} = 240 \end{aligned}$$

$$\begin{aligned} p_{01}(M - E) &= \frac{\sum p_1 q_0 + \sum p_1 q_1}{\sum p_0 q_0 + \sum p_0 q_1} \times 100 \\ &= \frac{350 + 460}{140 + 200} \times 100 \\ &= \frac{810}{340} \times 100 = 238.24 \end{aligned}$$

Note: There is printing mistake in the text question.

Q.7. Given that Laspeyre's and Dorbish-Bowley's Price Index Numbers are 160.32 and 164.18 respectively. Find Paasche's Price Index Number.

Sol.:

$$p_{01}(L) = 90 \quad p_{01}(D - B) = 164.18$$

$$p_{01}(D - B) = \frac{p_{01}(L) + p_{01}(P)}{2}$$

$$\begin{aligned} p_{01}(P) &= 2 \times p_{01}(D - B) - p_{01}(L) \\ &= 2(164.18) - 160.32 \\ &= 168.04 \end{aligned}$$

Q.8. Given that $\sum p_0 q_0 = 220$, $\sum p_0 q_1 = 380$, $\sum p_1 q_1 = 350$ is Marshall-Edgeworth's Price Index Number is 150, find Laspeyre's Price Index Number.

Sol.:

$$\sum p_0 q_0 = 220, \sum p_0 q_1 = 380, \sum p_1 q_1 = 350$$

$$p_{01}(M - E) = 150$$

$$\frac{\sum p_1 q_0 + \sum p_1 q_1}{\sum p_0 q_0 + \sum p_0 q_1} \times 100 = 150$$

$$\therefore \frac{\sum p_1 q_0 + 350}{220 + 380} \times 100 = 150$$

$$\therefore \sum p_1 q_0 + 350 = \frac{150 \times 600}{100}$$

$$\therefore \sum p_1 q_0 + 350 = 900$$

$$\therefore \sum p_1 q_0 = 900 - 350$$

$$\therefore \sum p_1 q_0 = 550$$

$$\begin{aligned} \therefore p_{01}(L) &= \frac{\sum p_1 q_0}{\sum p_0 q_0} \times 100 \\ &= \frac{550}{220} \times 100 \\ &= 250 \end{aligned}$$

Q.9. Find x in the following table if Laspeyre's and Paasche's Price Index Numbers are equal.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	2	10	2	5
B	2	5	x	2

Sol.:

Commodity	p_0	q_0	p_1	q_1	p_0q_0	p_0q_1	p_1q_0	p_1q_1
A	2	10	2	5	20	10	20	10
B	2	5	x	2	10	4	$5x$	$2x$
					30	14	$5x + 20$	$2x + 10$

$$\Sigma p_0q_0 = 30, \Sigma p_0q_1 = 14, \Sigma p_1q_0 = 5x + 20, \Sigma p_1q_1 = 2x + 10$$

$$p_{01}(L) = p_{01}(P)$$

$$\therefore \frac{\Sigma p_1q_0}{\Sigma p_0q_0} \times 100 = \frac{\Sigma p_1q_1}{\Sigma p_0q_1} \times 100$$

$$\therefore \frac{5x + 20}{30} = \frac{2x + 10}{14}$$

$$\therefore 70x + 280 = 60x + 300$$

$$\therefore 10x = 20$$

$$\therefore x = 2$$

Q.10. If Laspeyre's Price Index Number is four times Paasche's Price Index Number, then find the relation between Dorbish-Bowley's and Fisher's Price Index Numbers.

Sol.: Given $p_{01}(L) = 4 \cdot p_{01}(P)$

$$\begin{aligned} \text{Now } p_{01}(D - B) &= \frac{p_{01}(L) + p_{01}(P)}{2} \\ &= \frac{4p_{01}(P) + p_{01}(P)}{2} \end{aligned}$$

$$p_{01}(D - B) = \frac{5 \cdot p_{01}(P)}{2} \quad (i)$$

$$\begin{aligned} \text{Also, } p_{01}(F) &= \sqrt{p_{01}(L) \times p_{01}(P)} \\ &= \sqrt{4 \cdot p_{01}(P) \times p_{01}(P)} \\ p_{01}(F) &= 2 \cdot p_{01}(P) \\ &= \frac{2 \times 2 \times p_{01}(D - B)}{5} \quad \text{by (i)} \\ 5 \cdot p_{01}(F) &= 4 \cdot p_{01}(D - B) \end{aligned}$$

Q.11. If Dorbish-Bowley's and Fisher's Price Index Numbers are 5 and 4, respectively, then find Laspeyre's and Paasche's Price Index Numbers.

Sol.: $p_{01}(D - B) = 5$ $p_{01}(F) = 4$

$$\frac{p_{01}(L) + p_{01}(P)}{2} = 5 \text{ and } \sqrt{p_{01}(L) \cdot p_{01}(P)} = 4$$

$$p_{01}(L) + p_{01}(P) = 10 \quad (i)$$

$$\text{and } p_{01}(L) p_{01}(P) = 16 \quad (ii)$$

$$p_{01}(P) = \frac{16}{p_{01}(L)}$$

$$\therefore p_{01}(L) + \frac{16}{p_{01}(L)} = 10 \quad \text{by (ii)}$$

$$\therefore [p_{01}(L)]^2 + 16 = 10 p_{01}(L)$$

$$\therefore [p_{01}(L)]^2 - 10 p_{01}(L) + 16 = 0$$

$$\therefore [p_{01}(L) - 2] [p_{01}(L) - 8] = 0$$

$$\therefore p_{01}(L) = 2 \text{ or } p_{01}(L) = 8$$

From (ii), When $p_{01}(L) = 2$, $p_{01}(P) = 8$

From (ii), When $p_{01}(L) = 8$, $p_{01}(P) = 2$

But as $AM > GM$

We have $p_{01}(P) = 8$ and $p_{01}(L) = 2$



TEXTUAL EXERCISE 5.3

Calculate the cost of living index in problems 1 to 3

Q.1.

Group	Base Year		Current Year Price
	Price	Quantity	
Food	120	15	170
Clothing	150	20	190
Fuel & Lighting	130	30	220
House Rent	160	10	180
Miscellaneous	200	12	200

Sol.:

Group	P_0	q_0	P_1	P_1q_0	P_0q_0
Food	120	15	170	2550	1800
Clothing	150	20	190	3800	3000
Fuel & Lighting	130	30	220	6600	3900
House Rent	160	10	180	1800	1600
Miscellaneous	200	12	200	2400	2400
				17150	12700

$$\Sigma P_1q_0 = 17150, \Sigma P_0q_0 = 12700$$

Cost of living index is

$$CLI = \frac{\Sigma P_1q_0}{\Sigma P_0q_0} \times 100$$

$$CLI = \frac{17150}{12700} \times 100$$

$$= 135.04$$

Q.2.

Group	Base Year		Current Year Price
	Price	Quantity	
Food	40	15	45
Clothing	30	10	35
Fuel & Lighting	20	17	25
House Rent	60	22	70
Miscellaneous	70	25	80

Sol.:

Group	P_0	q_0	P_1	P_1q_0	P_0q_0
Food	40	15	45	675	600
Clothing	30	10	35	350	300
Fuel & Lighting	20	17	25	425	340
House rent	60	22	70	1540	1320
Miscellaneous	70	25	80	2000	1750
				4990	4310

$$\Sigma P_1q_0 = 4990 \quad \Sigma P_0q_0 = 4310$$

$$CLI = \frac{\Sigma P_1q_0}{\Sigma P_0q_0} \times 100$$

$$= \frac{4990}{4310} \times 100$$

$$= 115.78$$

Q.3.

Group	Base Year		Current Year Price
	Price	Quantity	
Food	132	10	170
Clothing	154	12	160
Fuel & Lighting	164	20	180
House Rent	175	18	195
Miscellaneous	128	5	120

Sol.:

Group	P_0	Q_0	P_1	P_1Q_0	P_0Q_0
Food	132	10	170	1700	1320
Clothing	154	12	160	1920	1848
Fuel & Lighting	164	20	180	3600	3280
House rent	175	18	195	3510	3150
Miscellaneous	128	5	120	600	640
				11330	10238

$\Sigma P_1Q_0 = 11330, \Sigma P_0Q_0 = 10238$

$$CLI = \frac{\Sigma P_1Q_0}{\Sigma P_0Q_0} \times 100$$
$$= \frac{11330}{10238} \times 100$$
$$= 110.67$$

Base year weights (W) and current year price relatives (I) are given in problems 4 to 8. Calculate the cost of living index in each case

Q.4.

Group	Food	Cloth-ing	Fuel & Light-ing	House Rent	Misce-llane-ous
I	70	90	100	60	80
W	5	3	2	4	6

Sol.:

Group	I	W	IW
Food	70	5	350
Clothing	90	3	270
Fuel & Lighting	100	2	200
House Rent	60	4	240
Miscellaneous	80	6	480
		20	1540

$\Sigma W = 20, \Sigma IW = 1540$

$$CLI = \frac{\Sigma IW}{\Sigma W}$$
$$= \frac{1540}{20}$$
$$= 77$$

Q.5.

Group	Food	Cloth-ing	Fuel & Light-ing	House Rent	Misce-llane-ous
I	400	300	150	120	100
W	3	3	4	5	2

Sol.:

Group	I	W	IW
Food	400	3	1200
Clothing	300	3	900
Fuel & Lighting	150	4	600
House Rent	120	5	600
Miscellaneous	100	2	200
		17	3500

$\Sigma W = 17, \Sigma IW = 3500$

$$CLI = \frac{\Sigma IW}{\Sigma W}$$
$$= \frac{3500}{17}$$
$$= 205.88$$

Q.6.

Group	Food	Cloth-ing	Fuel & Light-ing	House Rent	Misce-llane-ous
I	200	150	120	180	160
W	30	20	10	40	50

Sol.:

Group	I	W	IW
Food	200	30	6000
Clothing	150	20	3000
Fuel & Lighting	120	10	1200
House Rent	180	40	7200
Miscellaneous	160	50	8000
		150	25400

$\Sigma W = 150, \Sigma IW = 25400$

$$\begin{aligned}
 \text{CLI} &= \frac{\sum IW}{\sum W} \\
 &= \frac{25400}{150} \\
 &= 169.33
 \end{aligned}$$

Q.7.

Group	Food	Clothing	Fuel & Lighting	House Rent	Miscellaneous
I	180	120	300	100	160
W	4	5	6	x	3

Sol.:

Group	I	W	IW
Food	180	4	720
Clothing	120	5	600
Fuel & Lighting	300	6	1800
House Rent	100	x	100x
Miscellaneous	160	3	480
		x+18	100x+3600

$$\sum W = x + 18, \sum IW = 100x + 3600$$

$$\text{CLI} = 150$$

$$\therefore \frac{\sum IW}{\sum W} = 150$$

$$\therefore \frac{100x + 3600}{x + 18} = 150$$

$$\therefore 100x + 3600 = 150x + 2700$$

$$\therefore 50x = 900$$

$$\therefore x = 18$$

Q.8. Find y if the cost of living index is 200

Group	Food	Clothing	Fuel & Lighting	House Rent	Miscellaneous
I	180	120	160	300	200
W	4	5	3	y	2

Sol.:

Group	I	W	IW
Food	180	4	720
Clothing	120	5	600
Fuel & Lighting	160	3	480
House Rent	300	y	300y
Miscellaneous	200	2	400
		y+14	300y+2200

$$\sum W = y + 18, \sum IW = 300y + 2200$$

$$\text{CLI} = 200$$

$$\therefore \frac{\sum IW}{\sum W} = 200$$

$$\therefore \frac{300y + 2200}{y + 14} = 200$$

$$\therefore 300y + 2200 = 200y + 2800$$

$$\therefore 100y = 600$$

$$\therefore y = 6$$

Q.9. The cost of living Index Number for year 1995 and 1999 are 140 and 200 respectively. A person earns ₹11,200 per month in the year 1995. What should be his monthly earning in the year 1999 in order to maintain his standard of living as in the year 1995?

Sol.:

$$\text{CLI (1995)} = 140$$

$$\text{CLI (1999)} = 200$$

$$\text{Income (1995)} = 11200$$

$$\text{Income (1999)} = ?$$

For year 1995

$$\text{Real Income} = \frac{\text{Income}}{\text{CLI}} \times 100$$

$$\begin{aligned}
 &= \frac{11200}{140} \times 200 \\
 &= 8000 \text{ ₹}
 \end{aligned}$$

For year 1999

$$\text{Real Income} = \frac{\text{Income}}{\text{CLI}} \times 100$$

$$\therefore 8000 = \frac{\text{Income} \times 100}{200}$$

$$\begin{aligned}
 \therefore \text{Income} &= \frac{8000 \times 200}{100} \\
 &= 16000
 \end{aligned}$$

$$\therefore \text{Income in 1999} = ₹16000$$

IT

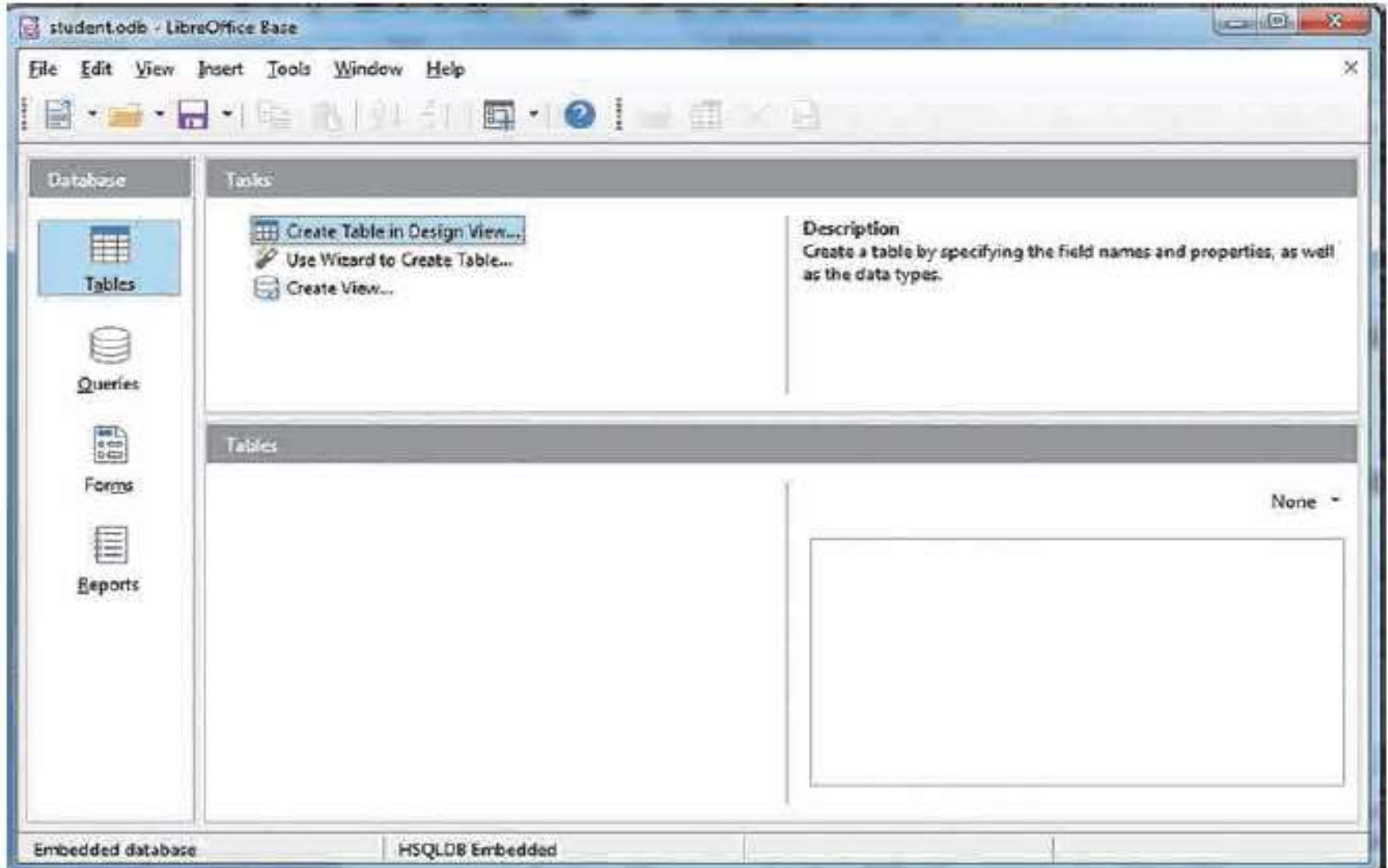
INFORMATION TECHNOLOGY SYJC

CHAPTER NO.5

Database Concept Using LibreOffice Base



LIBREOFFICE BASE SCREEN



LIBREOFFICE BASE SCREEN

Screen of Base Consist of following Parts:

- **Title Bar:-** It is the topmost bar it displays icon of application, name of file and application.
- **Menu Bar:-**It is present below Title bar. It displays names of different menus as File, Edit, View, Insert, Tools, Windows, helps. Etc. Every menu has dropdown list.
- **Standard Tool Bar:-** It consist of different icon like Opening a new document, saving a document, cut, copy, paste, undo, redo.



LIBREOFFICE BASE SCREEN

Screen of Base Consist of following Parts:

- **Working area:**-Rest of the part below toolbar is called as working area. It is divided into two panes-left pane and right pane.

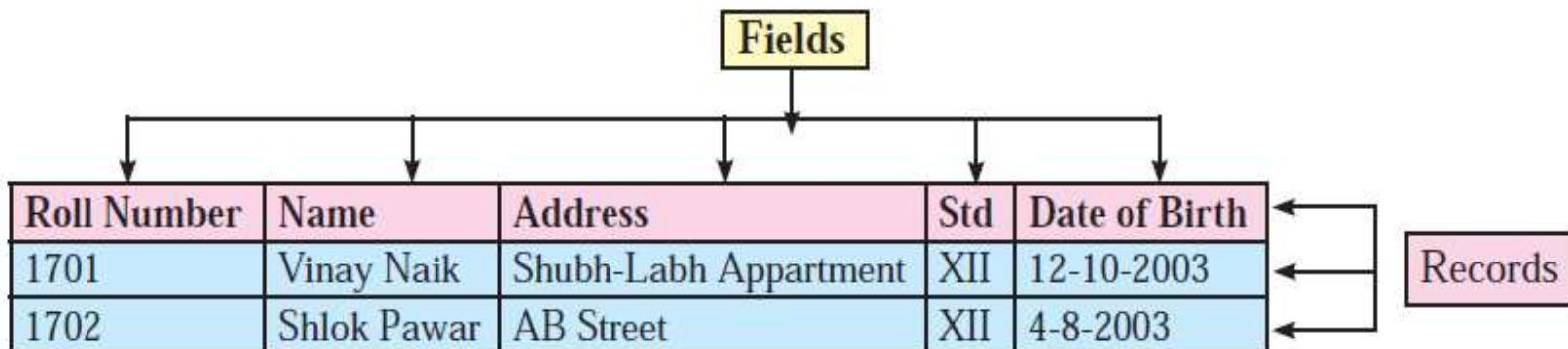
Left pane displays name of database objects like tables, queries, forms and report.

Right pane displays activities related to that particular object.



TABLE

- Table is a basic unit for storing data in database.
- Table is organized in the form of column and rows.
- The information stored under each column forms a row which is called as record.



DATA TYPES IN BASE

Data Type Name	Description
Tiny Integer [TINYINT]	Stores small Integer.
BigInt[BIGINT]	Stores Big Integer(hopping whole number), rarely used
Image[LONGVARBINARY]	Stores Image.
Binary[VARBINARY]	Stores binary information of variable length.
Binary(fix)[BINARY]	Stores binary data of fixed length.
Memo[LONGVARCHAR]	Stores descriptive type of information i.e large block of text like article text.
Text(fix)[CHAR]	Stores fix sized text.

DATA TYPES IN BASE

Data Type Name	Description
Number[NUMERIC]	Stores a number with or without decimal point. Base will display datatype's original length and allow to set decimal places after decimal point in design view of table. it is used when accuracy is required.
Decimal[DECIMAL]	
Integer[INTEGER]	Stores Integer most commonly used data type.
Small Integer[SMALLINT]	Stores integer
Float[FLOAT]	Stores a number with decimal point.
Real[REAL]	Stores a number with or without decimal point. It is used when approximate result required
Double[DOUBLE]	
Text[VARCHAR]	Stores variable sized text.
Text[VARCHAR_IGNORECASE]	A case insensitive version.
Yes/No [BOOLEAN]	Stores boolean type of data.
Date[DATE]	Stores date in mm/dd/yy format.
Time[TIME]	Stores time in hh:mm:ss format
Date/Time [TIMESTAMP]	Stores date as well as time.
Other[OTHER]	Stores any other object.

Thank you

