

**CBSE Class-10 Hindi**  
**NCERT Solutions**  
**Kshitij Chapter - 5**  
**Suryakant Tripathi Utsah**

**1. कवि बादल से फुहार, रिमझिम या बरसने के स्थान पर 'गरजने' के लिए कहता है, क्यों?**

**उत्तर:-** कवि ने बादल से फुहार डालने, रिमझिम करने या बरसने के लिए नहीं कहा बल्कि 'गरजने' के लिए कहा है; क्योंकि कवि बादलों को क्रांति का सूत्रधार मानता है। 'गरजना' विद्रोह का प्रतीक है। कवि बादलों से पौरुष दिखाने की कामना करता है। कवि ने बादलों के गरजने के माध्यम से कविता में नूतन विद्रोह का आह्वान किया है।

**2. कविता का शीर्षक उत्साह क्यों रखा गया है ?**

**उत्तर:-** कवि क्रांति लाने के लिए लोगों को उत्साहित करना चाहते हैं। बादलों में भीषण गति होती है उसी से वह संसार के ताप हरता है। कवि ऐसी ही गति, ऐसी ही भावना और शक्ति चाहता है। बादल का गरजना लोगों के मन में परिवर्तन करने का उत्साह भर देता है। इसलिए कविता का शीर्षक उत्साह रखा गया है।

**3. कविता में बादल किन-किन अर्थों की ओर संकेत करता है ?**

**उत्तर:-** उत्साह' कविता में बादल निम्नलिखित अर्थों की ओर संकेत करता है -

1. बादल जल बरसाने वाला शक्तिस्वरूप है।
2. बादल पीड़ित-प्यासे जन तथा तप्त धरती को शीतलता प्रदान करता है।
3. बादल शोषितों के मन में उत्साह भर के परिवर्तन लाने के लिए प्रेरित करता है

**4. शब्दों का ऐसा प्रयोग जिससे कविता के किसी खास भाव या दृश्य में ध्वन्यात्मक प्रभाव पैदा हो, नाद-सौंदर्य कहलाता है। उत्साह कविता में ऐसे कौन-से शब्द हैं जिनमें नाद-सौंदर्य मौजूद है, छाँटकर लिखें।**

**उत्तर:-** 1. "घेर घेर घोर गगन, धाराधर ओ!

2. ललित ललित, काले घुँघराले,

बाल कल्पना के-से पाले

3. "विद्युत-छवि उर में" कविता की इन पंक्तियों में नाद-सौंदर्य मौजूद है।

**At Nahi Rahi Hai**

• रचना-अभिव्यक्ति

1. जैसे बादल उमड़-घुमड़कर बारिश करते हैं वैसे ही कवि के अंतर्मन में भी भावों के बादल उमड़-घुमड़कर कविता के रूप में

अभिव्यक्त होते हैं। ऐसे ही किसी प्राकृतिक सौंदर्य को देखकर अपने उमड़ते भावों को कविता में उतारिए।

उत्तर:- दूर आसमानों में बादलों की छवि देख,  
जगी मेरे मन में भी आस  
प्यास के मारों को मिली राहत की साँस  
तड़पती विरहणी की प्रेमी से मिलन की वजह खास  
धरती को भी मिली तृप्ति की आस  
मोर भी करने लगा प्रीतम को मिलने का प्रयास  
किसान के आँखों में भी जगी एक चमक खास  
देखो बादल लाया अपने साथ कितनी आस।

**1. छायावाद की एक खास विशेषता है अन्तर्मन के भावों का बाहर की दुनिया से सामंजस्य बिठाना। कविता की किन पंक्तियों को पढ़कर यह धारणा पुष्ट होती है? लिखिए।**

उत्तर:- कविता के निम्नलिखित पंक्तियों को पढ़कर यह धारणा पुष्ट होती है कि प्रस्तुत कविता में अन्तर्मन के भावों का बाहर की दुनिया से सामंजस्य बिठाया गया है :

आभा फागुन की तन  
सट नहीं रही है।  
और  
कहीं साँस लेते हो,  
घर घर भर देते हो,  
उड़ने को नभ में तुम,  
पर पर कर देते हो।  
ये पंक्तियाँ फागुन और मानव मन दोनों के लिए प्रयुक्त हुई हैं।

**2. कवि की आँख फागुन की सुंदरता से क्यों नहीं हट रही है?**

उत्तर:- फागुन बहुत मतवाला, मस्त और शोभाशाली है। फागुन के महीने में प्राकृतिक सौंदर्य अपने चरम पर होता है। उसका रूप सौंदर्य रंग-बिरंगे फूलों और हवाओं से प्रकट होता है। इसलिए आँखें फागुन की सुन्दरता से मंत्रमुग्ध हैं, जो चाह कर भी वहाँ से नहीं हटती।

**3. प्रस्तुत कविता में कवि ने प्रकृति की व्यापकता का वर्णन किन रूपों में किया है ?**

उत्तर:- प्रस्तुत कविता 'अट नहीं रही है' में कवि सूर्यकान्त त्रिपाठी 'निराला' जी ने फागुन के सर्वव्यापी सौन्दर्य और मादक रूप के प्रभाव को दर्शाया है। फागुन का सौंदर्य असीम है। कवि ने उसे हर जगह छलकते हुए दिखाया है, जो घर-घर में फैला हुआ है। यहाँ 'घर-घर भर देते हो' में फूलों की शोभा की ओर संकेत है और मन में उठी खुशी की ओर भी। 'उड़ने को पर पर करना' भी ऐसा सांकेतिक प्रयोग है, जो पक्षियों की उड़ान पर लागू होता है और मन की उमंग पर भी। सौंदर्य से आँख न हटा पाना भी उसके विस्तार

की झलक देता है।

#### 4. फागुन में ऐसा क्या होता है जो बाकी ऋतुओं से भिन्न होता है ?

उत्तर:- फागुन में सर्वत्र मादकता सुन्दरता छाई रहती है। प्राकृतिक शोभा अपने पूर्ण यौवन पर होती है। पेड़-पौधे नए पत्तों, फल- फूलों से लद जाते हैं, हवा सुगन्धित हो उठती है। आकाश साफ-स्वच्छ होता है। पक्षियों के समूह आकाश में विहार करते दिखाई देते हैं। बाग-बगीचों और पक्षियों में उल्लास भर जाता है। इस तरह फागुन का सौंदर्य बाकी ऋतुओं से भिन्न है।

#### 5. इन कविताओं के आधार पर निराला के काव्य-शिल्प की विशेषताएँ बताएँ।

उत्तर:- महाकवि सूर्यकान्त त्रिपाठी 'निराला' जी छायावाद के प्रमुख कवि माने जाते हैं। छायावाद की प्रमुख विशेषताएँ हैं - प्रकृति चित्रण और प्राकृतिक उपादानों का मानवीकरण। 'उत्साह' और 'अट नहीं रही है' दोनों ही कविताओं में प्राकृतिक उपादानों का चित्रण और मानवीकरण हुआ है। काव्य के दो पक्ष हुआ करते हैं - अनुभूति पक्ष और अभिव्यक्ति पक्ष अर्थात् भाव पक्ष और शिल्प पक्ष। इस दृष्टि से दोनों कविताएँ सराहनीय हैं। छायावाद की अन्य विशेषताएँ जैसे गेयता, प्रवाहमयता, अलंकार योजना और संगीतात्मकता आदि भी विद्यमान हैं। 'निराला' जी की भाषा एक ओर जहाँ संस्कृतनिष्ठ, सामासिक और आलंकारिक है तो वहीं दूसरी ओर ठेठ ग्रामीण शब्दों का प्रयोग भी दर्शनीय है। अतुकांत शैली में रचित कविताओं में क्रांति का स्वर, मादकता एवम् मोहकता भरी है। भाषा सरल, सहज, सुबोध और प्रवाहमयी है।

#### • रचना और अभिव्यक्ति

##### 1. होली के आसपास प्रकृति में जो परिवर्तन दिखाई देते हैं, उन्हें लिखिए।

उत्तर:- होली का त्यौहार फागुन मास में आता है। इस समय चारों ओर मादक हवाएँ चलती हैं होली के समय चारों तरफ़ का वातावरण रंगों से भर जाता है। चारों ओर रंग ही रंग बिखरे होते हैं। प्रकृति भी उस समय रंगों से वंचित नहीं रह पाती है। प्रकृति के हरे भरे वृक्ष तथा रंग-बिरंगे फूल होली के महत्व को और अधिक बढ़ा देते हैं। फूलों से युक्त वृक्ष चारों ओर मंद सुगंध बिखेर देते हैं। लोगों के मन उमंग और आनंद से भर जाते हैं।

# कक्षा X ABCDE हिन्दी

ONLINE ASSIGNMENT - 03  
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J. T. G. J. Sch.

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## पाठ - 05 कविता - 'उत्साह'

निर्देश : पीठित कविता के आधार पर निम्न प्रश्नों के उत्तर स्वच्छतापूर्वक संक्षेप में लिखिये -

- प्र०(1) 'उत्साह' शीर्षक पाठक के मन में कौन सा भाव जगाता है?
- प्र०(2) यह किस प्रकार का गीत है?
- प्र०(3) कविता में आह्वान किसका किया गया है?
- प्र०(4) कविता के रचनाकार किस द्वारा के कवि हैं? पूरा नाम लिखिये।
- प्र०(5) कविता किस भाषा में रचित है?
- प्र०(6) कवि निशला ने अपनी बात कहने के लिए किसे माध्यम बनाया है?
- प्र०(7) बादल किसके प्रतीक हैं?
- प्र०(8) शब्दार्थ लिखो - धाराधर, ललित, विद्युत, नूतन, उन्मत्त, निदाघ, तप्त।
- प्र०(9) बादल के कौन से दो पर्यायवाची प्रयुक्त हुए हैं?
- प्र०(10) कविता में कौन-सा अलंकार तथा रस है?
- प्र०(11) बालक और बादल में क्या समानता दिखाई गई है?
- प्र०(12) कवि और बादल में क्या साम्य है?
- प्र०(13) संसार के लोग अनमने और व्याकुल क्यों हैं?
- प्र०(14) बादल किस दिशा से आये हैं?
- प्र०(15) तप्त धरा का क्या अर्थ है?
- प्र०(16) कवि बादलों से क्या चाहता है?
- प्र०(17) शब्दार्थ लिखो - विकल, अनंत, अज्ञात, धरा, शीतल

अनुच्छेद लेखन - 'बादल: क्रान्तिरूत' पर एक अनुच्छेद लिखो।





1055CH05

**सूर्यकांत** त्रिपाठी 'निराला' का जन्म बंगाल के महिषादल में सन् 1899 में हुआ। वे मूलतः गढ़ाकोला (ज़िला उन्नाव), उत्तर प्रदेश के निवासी थे। निराला की औपचारिक शिक्षा नौवीं तक महिषादल में ही हुई। उन्होंने स्वाध्याय से संस्कृत, बांग्ला और अंग्रेज़ी का ज्ञान अर्जित किया। वे संगीत और दर्शनशास्त्र के भी गहरे अध्येता थे। रामकृष्ण परमहंस और विवेकानंद की विचारधारा ने उन पर विशेष प्रभाव डाला।

निराला का पारिवारिक जीवन दुखों और संघर्षों से भरा था। आत्मीय जनों के असामयिक निधन ने उन्हें भीतर तक तोड़ दिया। साहित्यिक मोर्चे पर भी उन्होंने अनवरत संघर्ष किया। सन् 1961 में उनका देहांत हो गया।

उनकी प्रमुख काव्य-रचनाएँ हैं—**अनामिका**, **परिमल**, **गीतिका**, **कुकुरमुत्ता** और **नए पत्ते**। उपन्यास, कहानी, आलोचना और निबंध लेखन में भी उनकी ख्याति अविस्मरणीय है। **निराला रचनावली** के आठ खंडों में उनका संपूर्ण साहित्य प्रकाशित है।

निराला विस्तृत सरोकारों के कवि हैं। दार्शनिकता, विद्रोह, क्रांति, प्रेम की तरलता और प्रकृति का विराट तथा उदात्त चित्र उनकी रचनाओं में उपस्थित है। उनके विद्रोही स्वभाव ने कविता के भाव-जगत और शिल्प-जगत में नए प्रयोगों को संभव किया। छायावादी रचनाकारों में उन्होंने सबसे पहले मुक्त छंद का प्रयोग किया। शोषित, उपेक्षित, पीड़ित और प्रताड़ित जन के प्रति उनकी कविता में जहाँ गहरी सहानुभूति का भाव मिलता है, वहीं शोषक वर्ग और सत्ता के प्रति प्रचंड प्रतिकार का भाव भी।



5

**सूर्यकांत  
त्रिपाठी  
'निराला'**

**उत्साह** एक आह्वान गीत है जो बादल को संबोधित है। बादल निराला का प्रिय विषय है। कविता में बादल एक तरफ़ पीड़ित-प्यासे जन की आकांक्षा को पूरा करने वाला है, तो दूसरी तरफ़ वही बादल नयी कल्पना और नए अंकुर के लिए विध्वंस, विप्लव और क्रांति चेतना को संभव करने वाला भी। कवि जीवन को व्यापक और समग्र दृष्टि से देखता है। कविता में ललित कल्पना और क्रांति-चेतना दोनों हैं। सामाजिक क्रांति या बदलाव में साहित्य की भूमिका महत्त्वपूर्ण होती है, निराला इसे 'नवजीवन' और 'नूतन कविता' के संदर्भों में देखते हैं।

**अट नहीं रही है** कविता फागुन की मादकता को प्रकट करती है। कवि फागुन की सर्वव्यापक सुंदरता को अनेक संदर्भों में देखता है। जब मन प्रसन्न हो तो हर तरफ़ फागुन का ही सौंदर्य और उल्लास दिखाई पड़ता है। सुंदर शब्दों के चयन एवं लय ने कविता को भी फागुन की ही तरह सुंदर एवं ललित बना दिया है।



## उत्साह

बादल, गरजो!—  
 घेर घेर घोर गगन, धाराधर ओ!  
 ललित ललित, काले घुँघराले,  
 बाल कल्पना के-से पाले,  
 विद्युत-छबि उर में, कवि, नवजीवन वाले!  
 वज्र छिपा, नूतन कविता  
 फिर भर दो—  
 बादल, गरजो!  
 विकल विकल, उन्मन थे उन्मन  
 विश्व के निदाघ के सकल जन,  
 आए अज्ञात दिशा से अनंत के घन!  
 तप्त धरा, जल से फिर  
 शीतल कर दो—  
 बादल, गरजो!

## अट नहीं रही है

अट नहीं रही है  
आभा फागुन की तन  
सट नहीं रही है।

कहीं साँस लेते हो,  
घर-घर भर देते हो,  
उड़ने को नभ में तुम  
पर-पर कर देते हो,  
आँख हटाता हूँ तो  
हट नहीं रही है।  
पत्तों से लदी डाल  
कहीं हरी, कहीं लाल,  
कहीं पड़ी है उर में  
मंद-गंध-पुष्प-माल,  
पाट-पाट शोभा-श्री  
पट नहीं रही है।





## उत्साह

1. कवि बादल से फुहार, रिमझिम या बरसने के स्थान पर 'गरजने' के लिए कहता है, क्यों?
2. कविता का शीर्षक **उत्साह** क्यों रखा गया है?
3. कविता में बादल किन-किन अर्थों की ओर संकेत करता है?
4. शब्दों का ऐसा प्रयोग जिससे कविता के किसी खास भाव या दृश्य में ध्वन्यात्मक प्रभाव पैदा हो, नाद-सौंदर्य कहलाता है। **उत्साह** कविता में ऐसे कौन-से शब्द हैं जिनमें नाद-सौंदर्य मौजूद है, छाँटकर लिखें।

## रचना और अभिव्यक्ति

5. जैसे बादल उमड़-घुमड़कर बारिश करते हैं वैसे ही कवि के अंतर्मन में भी भावों के बादल उमड़-घुमड़कर कविता के रूप में अभिव्यक्त होते हैं। ऐसे ही किसी प्राकृतिक सौंदर्य को देखकर अपने उमड़ते भावों को कविता में उतारिए।

## पाठेतर सक्रियता

- बादलों पर अनेक कविताएँ हैं। कुछ कविताओं का संकलन करें और उनका चित्रांकन भी कीजिए।

## अट नहीं रही है

1. छायावाद की एक खास विशेषता है अंतर्मन के भावों का बाहर की दुनिया से सामंजस्य बिठाना। कविता की किन पंक्तियों को पढ़कर यह धारणा पुष्ट होती है? लिखिए।
2. कवि की आँख फागुन की सुंदरता से क्यों नहीं हट रही है?
3. प्रस्तुत कविता में कवि ने प्रकृति की व्यापकता का वर्णन किन रूपों में किया है?
4. फागुन में ऐसा क्या होता है जो बाकी ऋतुओं से भिन्न होता है?
5. इन कविताओं के आधार पर निराला के काव्य-शिल्प की विशेषताएँ लिखिए।

## रचना और अभिव्यक्ति

6. होली के आसपास प्रकृति में जो परिवर्तन दिखाई देते हैं, उन्हें लिखिए।



क्षितिज

## पाठेतर सक्रियता

- फागुन में गाए जाने वाले गीत जैसे होरी, फाग आदि गीतों के बारे में जानिए।

## शब्द-संपदा

धाराधर	- बादल
उन्मन	- कहीं मन न टिकने की स्थिति, अनमनापन
निदाघ	- गर्मी
सकल	- सब, सारे
आभा	- चमक
वज्र	- कठोर, भीषण
अट	- समाना, प्रविष्ट
पाट-पाट	- जगह-जगह
शोभा-श्री	- सौंदर्य से भरपूर
पट	- समा नहीं रही है

इस कविता में भी **निराला** फागुन के सौंदर्य में डूब गए हैं। उनमें फागुन की आभा रच गई है, ऐसी आभा जिसे न शब्दों से अलग किया जा सकता है, न फागुन से।

फूटे हैं आमों में बौर  
भौर वन-वन टूटे हैं।  
होली मची ठौर-ठौर,  
सभी बंधन छूटे हैं।

फागुन के रंग राग,  
बाग-वन फाग मचा है,  
भर गये मोती के झाग,  
जनों के मन लूटे हैं।

माथे अबीर से लाल,  
गाल सेंदुर के देखे,  
आँखें हुई हैं गुलाल,  
गेरू के ढेले कूटे हैं।



# JAGAT TARAN GOLDEN JUBILEE SCHOOL

Session 2020-21

Class- X

Subject: Hindi

## Video Link

Chapter 5- Utsaah

Follow the Instructions given below:-

To access the video tap the following link:

Visit link: <https://youtu.be/WSXTGESBJ-M>



# JAGAT TARAN GOLDEN JUBILEE SCHOOL

Session 2020-21

Class- X

Subject: Biology

## Video Link

Follow the Instructions given below:-

To access the video tap the following link:

Visit link: <https://youtu.be/wYsSYKNNst4>

Instructions for the students:

1. Open the above link.
2. Go through the content available in the video.
3. Try to solve these questions on the basis of video.

## Assignment questions

- a) Describe the structure and functioning of nephrons.
- b) How is the amount of Urine produced regulated?

What is osmoregulation?



# JAGAT TARAN GOLDEN JUBILEE SCHOOL

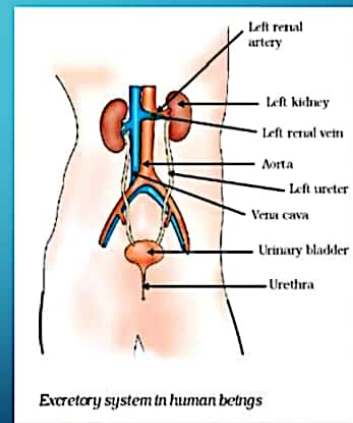
## EXCRETION IN PLANTS

- Plants get rid of excess water by transpiration .Many plant waste products are stored in cellular vacuoles .
- Waste products may be stored in leaves that fall off.Other waste products are stored as resins and gums in old xylem
- Some waste products are excreted as substances into the soil around them.



# WHAT IS EXCRETION ?

THE BIOLOGICAL PROCESS INVOLVED  
IN THE REMOVAL OF HARMFUL WASTES  
FROM THE BODY IS CALLED EXCRETION



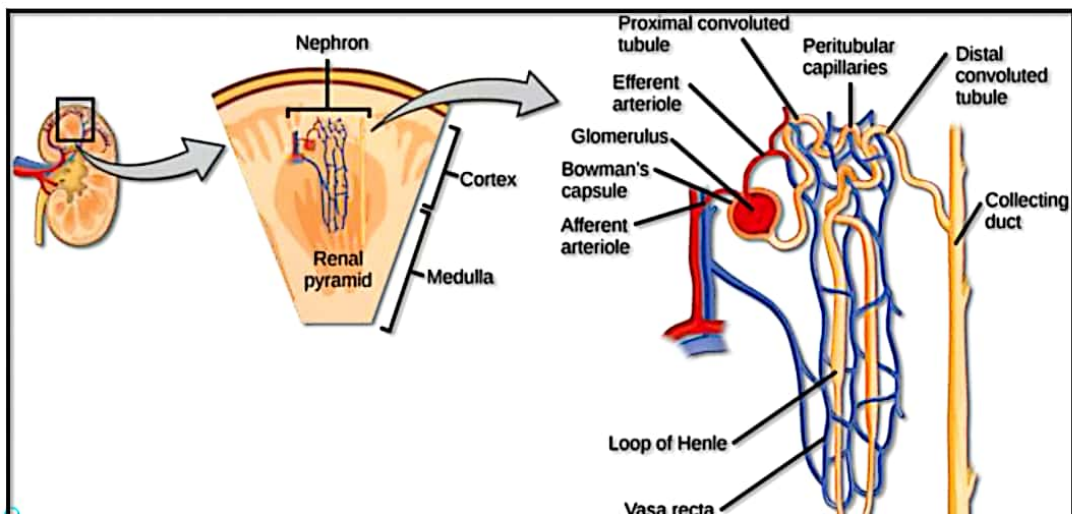
## EXCRETION IN HUMAN BEINGS

- The excretory system of human beings includes a pair of kidneys, a pair of ureters, a urinary bladder and a urethra.
- Urine produced in the kidneys passes through the ureters into the urinary bladder where it is stored until it is released through the urethra. Urine is made to filter out nitrogenous waste such as urea or uric acid from the blood.
- Capillary cluster in the kidney is associated with the cup shaped end of a tube that collects the filtered urine. Each kidney has large numbers of these filtration units called nephrons.

## **EXCRETION IN HUMAN BEINGS contd...**

- Some substances in the initial filtrate such as glucose, amino acids, salts and a major amount of water are re-absorbed
- The Urine forming in each kidney eventually enters a long tube ,the ureter, which connects the kidneys with the urinary bladder .Urine is stored in the urinary bladder until the pressure of the expanded bladder leads to the urge to pass it out through the urethra.

## Structure of a Nephron



Class 10

Subject-Chemistry

Assignment 3 and 4

Lesson-Acids,Bases and Salts

By-Nivedita Sinha

Session-2020-2021





# JAGAT TARAN GOLDEN JUBILEE SCHOOL

Session 2020-21

Class- X

Subject: English

## Video Link

Follow the Instructions given below:-

To access the video tap the following link:

Visit link: <https://youtu.be/lt74MD-ORDw>



# JAGAT TARAN GOLDEN JUBILEE SCHOOL

Session 2020-21

Class- X

Subject: English

## Video Link

Follow the Instructions given below:-

To access the video tap the following link:

**Visit link:** <https://youtu.be/polMeOPcaos>

For the poetry section from the book ,poem 1 and 2 ,both by Robert Frost namely-

1. Dust of Snow.
2. Fire and Ice.

## Dust of Snow (Poetry)

— Robert Frost

### Reference to context Questions:-

Read the stanza and answer the questions that follow:-

1. The way a crow  
Shook down on me  
The dust of snow  
From a hemlock tree.

- (i) Name the poem and the poet.
- (ii) Where was the crow?
- (iii) What did the crow do?
- (iv) What does a hemlock tree represent?

2. Has given my heart  
A change of mood.  
And saved some part  
Of a day I had rued.



- (i) who is 'I' in these lines?
- (ii) what changed the mood of the poet?
- (iii) what did the poet decide?
- (iv) what was the mood of the poet before and after the incident?

② fire and Ice  
— Robert Frost

### Questions

- Q.1) what is the central idea of the poem 'fire and Ice'?
- Q.2) what does 'fire' and 'Ice' stand for and what is the general opinion regarding the world?

## Basic Concepts with Examples

- **Linear Equation in Two Variables**

An equation which can be put in the form

$$ax + by + c = 0$$

where  $a$ ,  $b$  and  $c$  are real numbers ( $a, b \neq 0$ ) is called a **linear equation** in two variables 'x' and 'y'

- **General Form of a Pair of Linear Equations in Two Variables**

General form of a linear pair of equations in two variables is:

$$a_1x + b_1y + c_1 = 0 \text{ and}$$

$$a_2x + b_2y + c_2 = 0$$

where  $a_1, b_1, c_1, a_2, b_2, c_2$  are real numbers such that

$$a_1^2 + b_1^2 \neq 0 \text{ and } a_2^2 + b_2^2 \neq 0$$

- **General Form of a Pair of Linear Equations in Two Variables**

General form of a linear pair of equations in two variables is:

$$a_1x + b_1y + c_1 = 0 \text{ and}$$

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where  $a_1, b_1, c_1, a_2, b_2, c_2$  are real numbers such that

$$a_1^2 + b_1^2 \neq 0 \text{ and } a_2^2 + b_2^2 \neq 0$$

- **Solution of a Pair of Linear Equations in Two Variables**

The solution of a linear equation in two variables 'x' and 'y' is a pair of values (one for 'x' and other for 'y')

which makes the two sides of the equation equal.

There are two methods to solve a pair of linear equations:

(i) algebraic method

(ii) graphical method.

- **Algebraic Method**

We have already studied (i) Substitution method and (ii) Elimination method. Here, we will study cross-multiplication method also.

$$\text{If } a_1x + b_1y + c_1 = 0$$

- **Algebraic Method**

We have already studied (i) Substitution method and (ii) Elimination method. Here, we will study cross-multiplication method also.

$$\text{If } a_1 x + b_1 y + c_1 = 0$$

$$a_2 x + b_2 y + c_2 = 0$$

form a pair of linear equations, then the following three situations can arise:

(i) If  $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ , then the system is

**consistent.**

(ii) If  $\frac{a_1}{a_2} = \frac{b_1}{b_2}$ , then the system is

**inconsistent.**

(ii) If  $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ , then the system is



**dependent and consistent.**

- **Graphical Method of Solution of a Pair of Linear Equations**

(i) If the graphs of two equations of a system intersect at a point, the system is said to have a **unique solution**, i.e., the system is **consistent**.

(ii) If the graphs of two equations of a system are two parallel lines, the system is said to have **no solution**, i.e., the system is **inconsistent**.

(iii) When the graphs of two equations of a system are two coincident lines, the system is said to have **infinitely** many solutions, i.e., the system is **consistent and dependent**.

## Pair of Linear Equations in Two Variables

### Linear Equation

- An equation which can be put in the form  $ax + by + c = 0$ , where  $a$ ,  $b$  and  $c$  are real numbers and both  $a$  and  $b$  are nonzero is called a linear equation in two variables.

### Solution of an Equation

- Each solution  $(x, y)$  of a linear equation in two variables,  $ax + by + c = 0$ , corresponds to a point on the line representing the equation, and vice-versa.

### Pair of Linear Equations in Two Variables

- The general form for a pair of linear equations in two variables  $x$  and  $y$  is  $a_1x + b_1y + c_1 = 0$   
And  $a_2x + b_2y + c_2 = 0$

- Geometrically they look like the following:

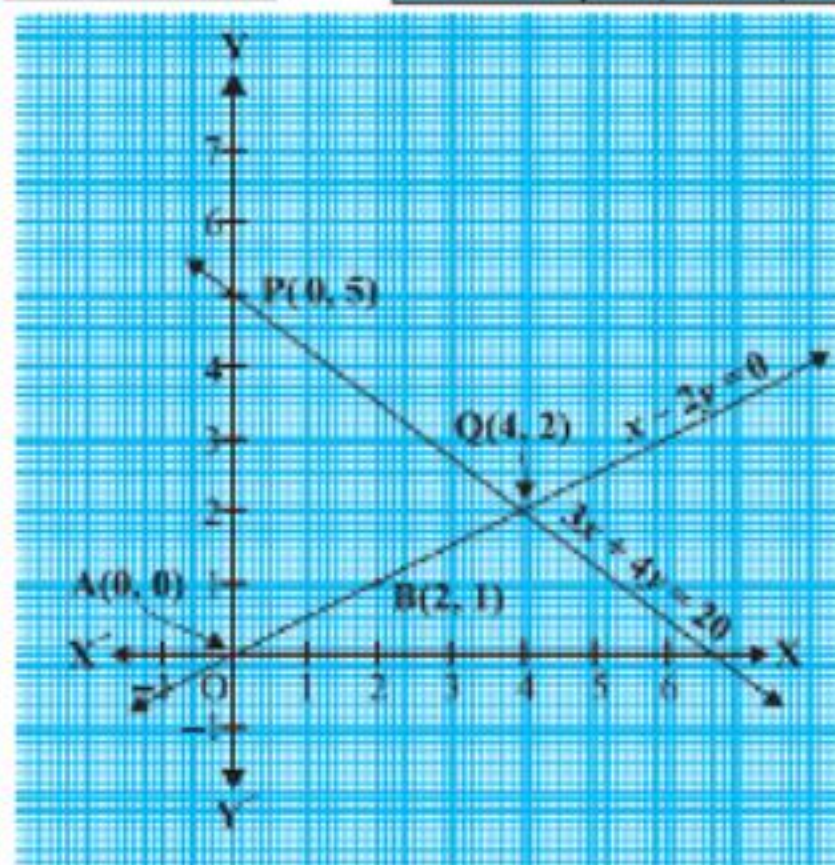


### Graphical Method of Solutions

- $x - 2y = 0$   
 $3x + 4y = 20$

x	y	
$\frac{x}{1}$	0	L

x	y		
0	$\frac{20}{4}$	4	
$\frac{20 - 3x}{3}$	0	2	



The solution is (4, 2), the point of intersection.

- To summarize the behavior of lines representing a pair of linear equations in two variables:
- The lines may intersect in a single point. In this case, the pair of equations has a unique solution (consistent pair of equations).
- The lines may be parallel. In this case, the equations have no solution (inconsistent pair of equations).
- The lines may be coincident. In this case, the equations have infinitely many solutions [dependent (consistent) pair of equations]

#### Substitution Method

The following are the steps:

- Find the value of one variable, say  $y$  in terms of the other variable, i.e.,  $x$  from either equation, whichever is convenient.
- Substitute this value of  $y$  in the other equation, and reduce it to an equation in one variable, i.e., in terms of  $x$ , which can be solved. Sometimes, you can get statements with no variable. If this statement is true, you can conclude that the pair of linear equations has infinitely many solutions. If the statement is false, then the pair of linear equations is inconsistent.
- Substitute the value of  $x$  (or  $y$ ) obtained in Step 2 in the equation used in Step 1 to obtain the value of the other variable.

#### Elimination Method

- Steps in the elimination method:
- First multiply both the equations by some suitable non-zero constants to make the coefficients of one variable (either  $x$  or  $y$ ) numerically equal.
- Then add or subtract one equation from the other so that one variable gets eliminated. If you get an equation in one variable, go to Step 3.  
If in Step 2, we obtain a true statement involving no variable, then the original pair of equations has infinitely many solutions.  
If in Step 2, we obtain a false statement involving no variable, then the original pair of equations has no solution, i.e., it is inconsistent.
- Solve the equation in one variable ( $x$  or  $y$ ) so obtained to get its value.
- Substitute this value of  $x$  (or  $y$ ) in either of the original equations to get the value of the other variable.

#### Cross Multiplication Method

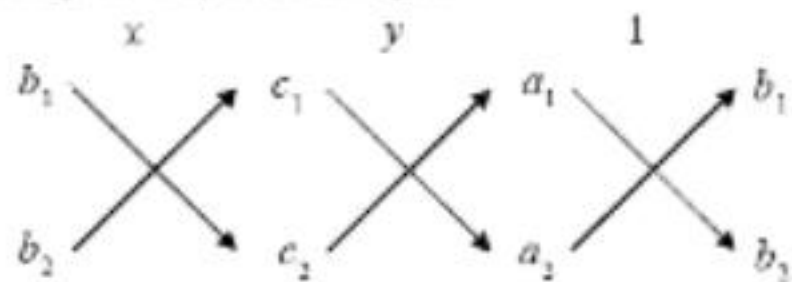
Steps:

Write the given equations in the form

$$a_1x + b_1y + c_1 = 0$$

$$\text{And } a_2x + b_2y + c_2 = 0$$

Taking the help of the diagram



Write Equations as

$$\frac{x}{\frac{c_1 - b_1y}{a_1}} = \frac{y}{\frac{c_2 - b_2y}{a_2}} = \frac{1}{\frac{a_1b_2 - a_2b_1}{a_1a_2}}$$

Find  $x$  and  $y$ , provided  $a_1b_2 - a_2b_1 \neq 0$



Table 3.4

Sl No.	Pair of lines	$\frac{a_1}{a_2}$	$\frac{b_1}{b_2}$	$\frac{c_1}{c_2}$	Compare the ratios	Graphical representation	Algebraic interpretation
1.	$x - 2y = 0$ $3x + 4y - 20 = 0$	$\frac{1}{3}$	$\frac{-2}{4}$	$\frac{0}{-20}$	$\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$	Intersecting lines	Exactly one solution (unique)
2.	$2x + 3y - 9 = 0$ $4x + 6y - 18 = 0$	$\frac{2}{4}$	$\frac{3}{6}$	$\frac{-9}{-18}$	$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$	Coincident lines	Infinitely many solutions
3.	$x + 2y - 4 = 0$ $2x + 4y - 12 = 0$	$\frac{1}{2}$	$\frac{2}{4}$	$\frac{-4}{-12}$	$\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$	Parallel lines	No solution



**Example 4 :** Check graphically whether the pair of equations

$$x + 3y = 6 \quad (1)$$

and

$$2x - 3y = 12 \quad (2)$$

is consistent. If so, solve them graphically.

**Solution :** Let us draw the graphs of the Equations (1) and (2). For this, we find two solutions of each of the equations, which are given in Table 3.5

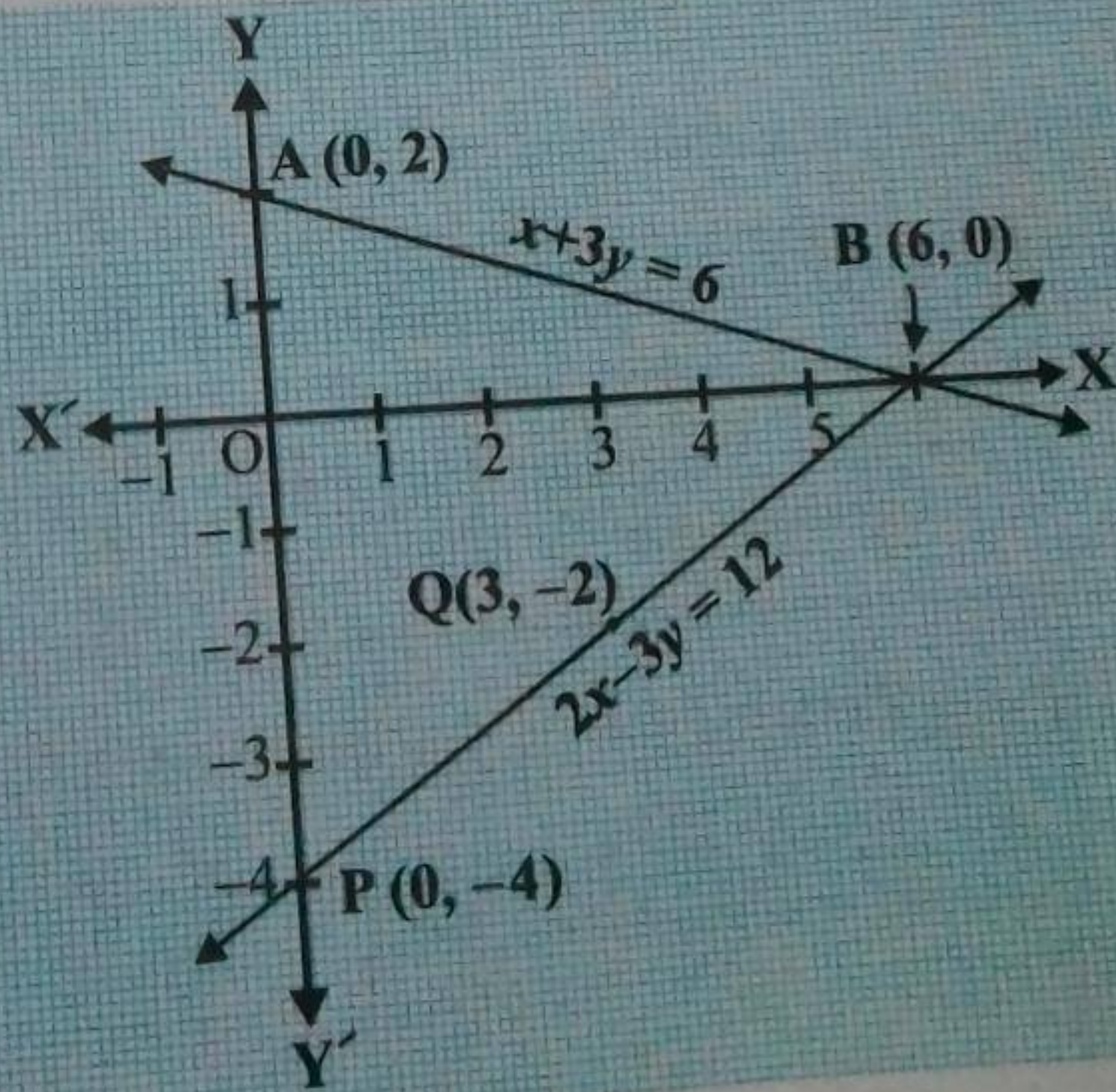
**Table 3.5**

$x$	0	6
$y = \frac{6-x}{3}$	2	0

$x$	0	3
$y = \frac{2x-12}{3}$	-4	-2

Plot the points  $A(0, 2)$ ,  $B(6, 0)$ ,  $P(0, -4)$  and  $Q(3, -2)$  on graph paper, and join the points to form the lines  $AB$  and  $PQ$  as shown in Fig. 3.5.

We observe that there is a point  $B(6, 0)$  common to both the lines  $AB$  and  $PQ$ . So, the solution of the pair of linear equations is  $x = 6$  and  $y = 0$ , i.e., the given pair of equations is consistent.



**Fig. 3.5**



**3.4.1 Substitution Method :** We shall explain the method of substitution by some examples.

**Example 7 :** Solve the following pair of equations by substitution method:

$$7x - 15y = 2$$

$$x + 2y = 3$$

**Solution :**

**Step 1 :** We pick either of the equations and write one variable in terms of

Let us consider the Equation (2) :

$$x + 2y = 3$$

and write it as

$$x = 3 - 2y$$



**Step 2 :** Substitute the value of  $x$  in Equation (1). We get

$$7(3 - 2y) - 15y = 2$$

i.e.,

$$21 - 14y - 15y = 2$$

i.e.,

$$-29y = -19$$

Therefore,

$$y = \frac{19}{29}$$

**Step 3 :** Substituting this value of  $y$  in Equation (3), we get

$$x = 3 - 2\left(\frac{19}{29}\right) = \frac{49}{29}$$

Therefore, the solution is  $x = \frac{49}{29}$ ,  $y = \frac{19}{29}$ .

**Verification :** Substituting  $x = \frac{49}{29}$  and  $y = \frac{19}{29}$ , you can verify that both the Equation

(1) and (2) are satisfied.

To understand the substitution method more clearly, let us consider it stepwise

**Step 1 :** Find the value of one variable, say  $y$  in terms of the other variable, i.e.,  $x$  from either equation, whichever is convenient.

**Step 2 :** Substitute this value of  $y$  in the other equation, and reduce it to an equation one variable, i.e., in terms of  $x$ , which can be solved. Sometimes, as in Examples 9 and 10 below, you can get statements with no variable. If this statement is true, you can conclude that the pair of linear equations has infinitely many solutions. If the statement is false, then the pair of linear equations is inconsistent.

**Step 3 :** Substitute the value of  $x$  (or  $y$ ) obtained in Step 2 in the equation used in Step 1 to obtain the value of the other variable.

**Remark :** We have **substituted** the value of one variable by expressing it in terms of the other variable to solve the pair of linear equations. That is why the method is known as the *substitution method*.



### 3.4.2 Elimination Method

Now let us consider another method of eliminating (i.e., removing) one variable. This method is sometimes more convenient than the substitution method. Let us see how it works.

**Example 11 :** The ratio of incomes of two persons is 9 : 7 and the ratio of their expenditures is 4 : 3. If each of them manages to save ₹ 2000 per month, find their monthly incomes.

**Solution :** Let us denote the incomes of the two persons by ₹  $9x$  and ₹  $7x$  respectively and their expenditures by ₹  $4y$  and ₹  $3y$  respectively. Then the equations formed are as follows:  
is given by :

$$9x - 4y = 2000$$

and

$$7x - 3y = 2000$$

**Step 1 :** Multiply Equation (1) by 3 and Equation (2) by 4 to make the coefficients of  $y$  equal. Then we get the equations:

$$27x - 12y = 6000$$

$$28x - 12y = 8000$$

**Step 2 :** Subtract Equation (3) from Equation (4) to *eliminate*  $y$ , because the coefficients of  $y$  are the same. So, we get

$$(28x - 27x) - (12y - 12y) = 8000 - 6000$$

i.e.,

$$x = 2000$$

**Step 3 :** Substituting this value of  $x$  in (1), we get

$$9(2000) - 4y = 2000$$

i.e.,

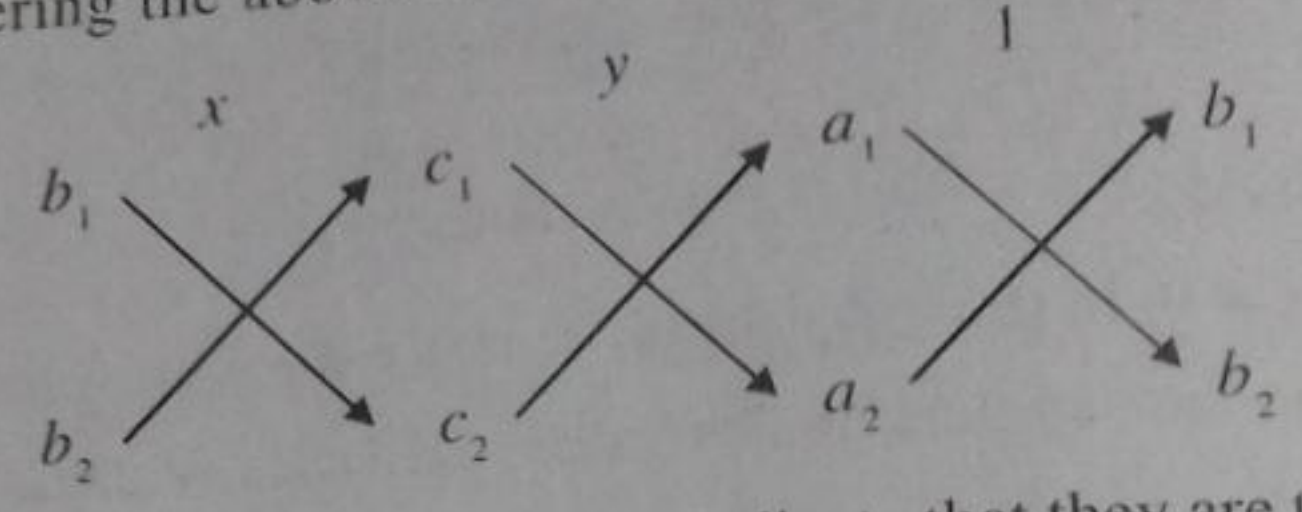
$$y = 4000$$



Note that you can write the solution given by Equations (5) and (6) in the following form :

$$\frac{x}{b_1c_2 - b_2c_1} = \frac{y}{c_1a_2 - c_2a_1} = \frac{1}{a_1b_2 - a_2b_1}$$

In remembering the above result, the following diagram may be helpful to you :



The arrows between the two numbers indicate that they are to be multiplied and the second product is to be subtracted from the first.

For solving a pair of linear equations by this method, we will follow the following steps :

- Step 1 :** Write the given equations in the form (1) and (2).
- Step 2 :** Taking the help of the diagram above, write Equations as given in
- Step 3 :** Find  $x$  and  $y$ , provided  $a_1b_2 - a_2b_1 \neq 0$

Step 2 above gives you an indication of why this method is called **cross-multiplication method**.

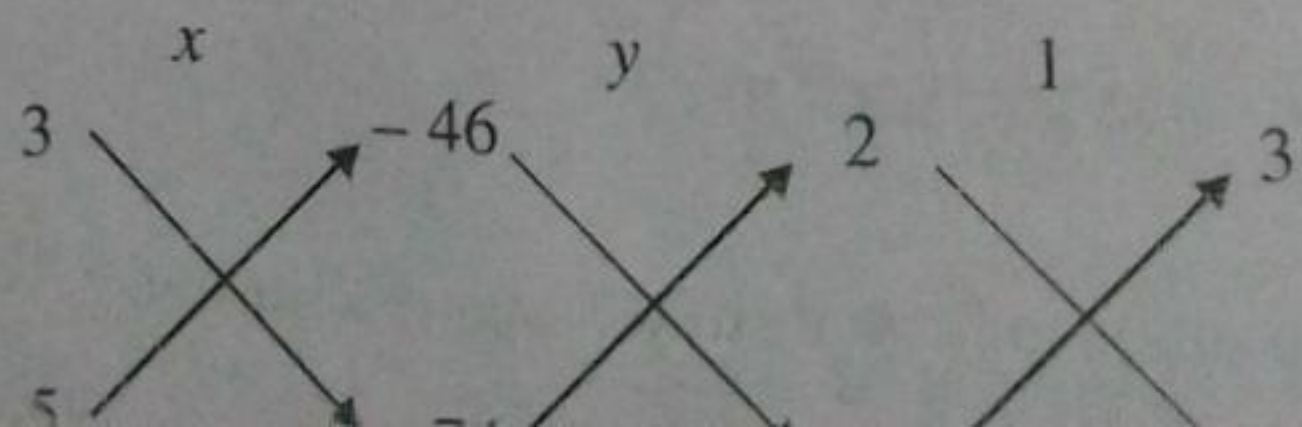
**Example 14 :** From a bus stand in Bangalore, if we buy 2 tickets to Malleswaram and 3 tickets to Yeshwanthpur, the total cost is ₹ 46; but if we buy 3 tickets to Malleswaram and 5 tickets to Yeshwanthpur the total cost is ₹ 74. Find the fares from the bus stand to Malleswaram, and to Yeshwanthpur.

**Solution :** Let ₹  $x$  be the fare from the bus stand in Bangalore to Malleswaram, and ₹  $y$  to Yeshwanthpur. From the given information, we have

$$2x + 3y = 46, \text{ i.e., } 2x + 3y - 46 = 0$$

$$3x + 5y = 74, \text{ i.e., } 3x + 5y - 74 = 0$$

To solve the equations by the cross-multiplication method, we draw the diagram given below.





Then 
$$\frac{x}{(3)(-74) - (5)(-46)} = \frac{y}{(-46)(3) - (-74)(2)} = \frac{1}{(2)(5) - (3)(3)}$$

i.e., 
$$\frac{x}{-222 + 230} = \frac{y}{-138 + 148} = \frac{1}{10 - 9}$$

i.e., 
$$\frac{x}{8} = \frac{y}{10} = \frac{1}{1}$$

i.e., 
$$\frac{x}{8} = \frac{1}{1} \text{ and } \frac{y}{10} = \frac{1}{1}$$

i.e., 
$$x = 8 \text{ and } y = 10$$

Hence, the fare from the bus stand in Bangalore to Malleswaram is ₹ 8 and the fare to Yeshwanthpur is ₹ 10.

**Verification:** You can check from the problem that the solution we have got is correct.



both the equations  
**Example 18 :** Solve the following pair of equations by reducing them to a linear equations :

$$\frac{5}{x-1} + \frac{1}{y-2} = 2$$

$$\frac{6}{x-1} - \frac{3}{y-2} = 1$$

**Solution :** Let us put  $\frac{1}{x-1} = p$  and  $\frac{1}{y-2} = q$ . Then the given equations

$$5\left(\frac{1}{x-1}\right) + \frac{1}{y-2} = 2$$

$$6\left(\frac{1}{x-1}\right) - 3\left(\frac{1}{y-2}\right) = 1$$

can be written as :

$$5p + q = 2$$

$$6p - 3q = 1$$



Equations (3) and (4) form a pair of linear equations in the general form. Now, you can use any method to solve these equations. We get  $p = \frac{1}{3}$  and  $q = \frac{1}{3}$ .

Now, substituting  $\frac{1}{x-1}$  for  $p$ , we have

$$\frac{1}{x-1} = \frac{1}{3},$$

i.e.,

$$x-1 = 3, \text{ i.e., } x = 4.$$

Similarly, substituting  $\frac{1}{y-2}$  for  $q$ , we get

$$\frac{1}{y-2} = \frac{1}{3}$$

i.e.,

$$3 = y-2, \text{ i.e., } y = 5$$

Hence,  $x = 4, y = 5$  is the required solution of the given pair of equations.

Substituting  $x = 4, y = 5$  in (1) and (2) to check whether they are



# JAGAT TARAN GOLDEN JUBILEE SCHOOL

Session 2020-21

Class- X

Subject: Mathematics

## Video Link

Chapter:3

Teacher: Ankita Lahiri

Instruction for class 10 mathematics students.

Follow the Instructions given below:-

To access the video tap the following link:

1. Given study material in PDF format is related with chapter 3 linear equation in two Variable.

For better understand open link.

**Visit link:** <https://youtu.be/t8nhtl7pzpU>

2. Try to understand the terms and explanation of chapter and note down the points in your note book.

3. Go through the examples given in PDF file.

4. Do the exercises given in NCERT BOOK.

5 . Make a proper record in your note book.



# Jagat taran golden jubilee school

## Class 10th PHYSICS

J. T. Golden Jubilee School

Std X Physics

(1)

### Ch - Electricity: -

If a plastic comb is brought near some very tiny pieces of paper, it will not have any effect on them. However if the comb is first rubbed with dry hair and then brought near the pieces of paper, it attracts the pieces of paper towards itself. Actually the comb was initially neutral so it has no effect on the pieces of paper. When it was rubbed with dry hair, it gets electric charge and acquires the ability to attract the pieces of paper. Similarly a glass rod rubbed with silk cloth and an ebonite rod rubbed with woolen cloth also acquires the ability to attract small pieces of paper.

Types of charges: There are two types of electric charges — positive charges and negative charges. — opposite charges attract each other whereas similar charges repel each other.

A proton has a positive charge of  $1.6 \times 10^{-19}$  Coulomb whereas an electron has a negative charge of  $1.6 \times 10^{-19}$  Coulomb.

number of electrons in one coulomb of charge =  $6.25 \times 10^{18}$

Conductors The flow of electric charges is called electricity.

Conductors :- The substances through which electric charges (electricity) can flow easily are called conductors. Ex - All metals like silver, copper, aluminium etc., metal alloys like nichrome, ~~mag~~ manganin etc. are conductors.

Insulators :- The substances through which electric charges can not flow at all are called insulators. Ex - Glass, rubber, plastic, paper, dry wood etc. are insulators.

There are two types of electricity —  
 1) Static electricity      2) Current electricity  
 In static electricity, electric charges do not move, like on glass rod.  
 In current electricity, electric charges are in motion and produce an electric current. The electricity which we use is the current electricity.

Electric Potential : — The electric potential at a point in an electric field is defined as the work which is done in moving a unit positive charge from infinity to that point.

Potential difference : — The potential difference between two points in an electric field is defined as the amount of work which is done in moving a unit charge from one point to the other point.

$$\text{Then pot. diff} = \frac{\text{Work done}}{\text{Quantity of charges}}$$

$$\text{or } V = \frac{W}{Q}$$

unit of potential diff is J/C or Volt  
 i.e. 1 Volt = 1 J/C

The pot. diff is measured by the instrument called Voltmeter.

Ques: Calculate the work done in moving a charge of 4 Coulombs from a point at 220 Volt to the other point at 230 Volt.

Sol: Pot. diff. (V) = 230 - 220 = 10 V  
 Q = 4 Coulombs  
 $V = \frac{W}{Q} \therefore W = V \times Q = 10 \times 4 = 40 \text{ J}$

Ques 1: What is the pot. diff between the terminals of a battery if 250 J of work is required to transfer 20 Coulombs of charge from one terminal to the other terminal of a battery?

①  
Electric current — The flow of electric charges (electron) is electric current.

The electric current is defined as the amount of electric charges flowing through a conductor in one second.

$$\text{Thus Electric Current} = \frac{\text{Quantity of charges}}{\text{time}}$$

$$\text{or } I = \frac{Q}{t}$$

Unit of electric current is Coulomb/Sec or Ampere (A)

$$\text{ie } 1 \text{ A} = 1 \text{ C/s}$$

1 ampere of electric current: If one coulomb of electric charges are flowing through a conductor in 1 second then the value of electric current is 1 ampere.

Electric current is measured by the instrument called ammeter.

Direction of electric current: —

~~The direction of~~ The conventional direction of electric current is from positive terminal to the negative terminal of a cell or battery. whereas the actual direction of electric current is from negative terminal to the positive terminal of a cell or battery.

Ques: If a pot. diff of 10 V causes a current of 2 A to flow for 1 minute, how much energy is transferred?

Sol  $V = 10 \text{ V}$ ,  $I = 2 \text{ A}$ ,  $t = 1 \text{ min} = 60 \text{ sec}$

$$I = \frac{Q}{t} \therefore Q = I \times t$$

$$\text{and } V = \frac{W}{Q} \therefore W = V \times Q = 10 \times 120 = 1200 \text{ J}$$

$$\text{Thus Energy} = 1200 \text{ J}$$



Ques 1:- A radio set draws a current of 0.36 A for 15 minutes, calculate the amount of electric charge that flows through the circuit.

Ques 2:- A flash of lightning carries 10 C of charge which flows for 0.01 sec. What is the current? If the voltage is 10 MV, what is the energy?  
hint - 1 MV =  $10^6$  V

Ques 3:- In 10 sec, a charge of 25 C leaves a battery and 200 J of energy are delivered.  
(a) what is the pot. diff. across the battery?  
(b) what current flows from the battery?

### Ohm's law

At the constant temperature, the current flowing through a conductor is directly proportional to the pot. diff. across the ends of a conductor. Thus if the pot. diff. across the ends of a conductor is  $V$  and the current flowing through the conductor is  $I$  then by ohm's law

$$V \propto I$$

$$\text{or } V = R \cdot I$$

where  $R$  is a constant which is called the resistance of the conductor.

$$\text{Here } R = \frac{V}{I}$$

unit of resistance ( $R$ ) is Volt / Amp or ohm

$$\text{Thus } 1 \text{ ohm } (\Omega) = 1 \text{ V/A}$$

1 ohm ( $\Omega$ ) of resistance: If the pot. diff. across the ends of a conductor is 1 V and the current flowing through the conductor is 1 amp then the resistance of the conductor is 1 ohm ( $\Omega$ ).



Electricity : CBSE Class 10 X Science (Physics)

Electricity: CBSE Class 10 X Science (Physics) In this...

<https://youtu.be/caJMuENuFTM>



# JAGAT TARAN GOLDEN JUBILEE SCHOOL

Session 2020-21

Class- X

Subject: Physics

**Video Link**

**Lesson: Electricity**

Follow the Instructions given below:-

To access the video tap the following link:

**Visit link:** <https://youtu.be/caJMuENuFTM>

# Jagat Taran Golden Jubilee School

Class 10

Subject – Geography

Session 2020-21

Assignment-3

**Video link given below is the digital content of Chapter 1 of Geography –**

**“RESOURCES AND DEVELOPMENT”.**

Go through the content of the chapter thoroughly and make notes.

The first link is the Video of the Chapter and the next three links are related to multiple choice questions, short questions and long answer questions.

Questions are already there in the link.

[https://diksha.gov.in/play/content/do\\_312795737823666176112054?referrer=utm\\_source%3Ddiksha\\_mobile%26utm\\_content%3Ddo\\_312796455289274368120446%26utm\\_campaign%3Dshare\\_content](https://diksha.gov.in/play/content/do_312795737823666176112054?referrer=utm_source%3Ddiksha_mobile%26utm_content%3Ddo_312796455289274368120446%26utm_campaign%3Dshare_content)

[https://diksha.gov.in/play/content/do\\_312952944016818176149?referrer=utm\\_source%3Ddiksha\\_mobile%26utm\\_content%3Ddo\\_312796455289274368120446%26utm\\_campaign%3Dshare\\_content](https://diksha.gov.in/play/content/do_312952944016818176149?referrer=utm_source%3Ddiksha_mobile%26utm_content%3Ddo_312796455289274368120446%26utm_campaign%3Dshare_content)

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# **Jagat Taran Golden Jubilee School**

Class 10

Subject – Economics

Session 2020-21

Assignment-3

**Video link given below is the digital content of Chapter 1 of Economics**

**CHAPTER'S NAME ----DEVELOPMENT**

**YOU TUBE LINK**

<https://youtu.be/6fNtmvmQDAw>

### Syllabus

**The Story of Development:** The traditional notion of development; National income and Per Capita Income. Growth of NI—critical appraisal of existing development indicators (PCI, IMR, SR and other income and health indicators); the need for health and educational development; Human Development Indicators (in simple and brief as a holistic measure of development); the approach to this theme : Use case study of three states (Kerala, Punjab and Bihar) or take a few countries (India, China, Sri Lanka and one developed country).

### Facts that Matter

1. **Economic development** applies to the all round development of a country where the people earn higher income and can satisfy all their needs. It is a process where the real per capita income increases over a long period. It is measured by per capita income and national income. It means progress. It has many aspects. Different people have different notions of development because life situations of persons are different and so are their aspirations, desires and goals.
2. Human development means the development of an individual in such a way that he could lead a happy life according to his cherished wish and fulfill all the materialistic desires.
3. **People want regular work, better wages, decent price** for their crops or other products. In other words, they want **more income**.
4. The measures of looking at development other than income are quality of life and environmental sustainability.
5. **Besides seeking more income, people also want equal treatment, freedom, security, respect of others, they resent discrimination.** All these are important goals.
6. **National Development** means the ideology of different persons regarding countries' development. These ideologies could be at times conflicting. It is measured by (a) **Average Income** (b) **Per Capita Income**
7. **People have different developmental goals.** Developmental goals are the aspirations and desires of the people. They are different for different individuals. Since people come from different situations, their developmental goals differ.
8. **People have conflicting goals** means that development for one may not be development for the other. Their goals may clash. The Sardar Sarovar Dam is an example of conflicting developmental goals for the people who are being affected by it. While the people of

Gujarat are happy as they will get water for irrigation and drinking in the areas which are deficient in water but the people of Madhya Pradesh are not at all happy because their villages and large part of land will submerge in water thereby leaving them landless and uprooted from their place of work with insufficient compensation.

9. For comparing countries, their income is considered to be one of the most important attributes. Countries with higher income are more developed than the countries with less income. It means that higher income means more of all things that human beings need. Whatever people like, and should have, they will be able to get with greater income. So, greater income itself is considered to be one important goal.
10. The World Bank applies some principles to classify different countries. It considers only the per capita income as the indicator of the development; the UNDP considers health, educational levels and the per capita income of the citizens of the country.
11. The World Bank says that countries with the per capita income of ₹ 4,53,000 per annum and above in 2004 are called **rich countries** and those with the per capita income of ₹ 37,000 or less are called **low-income countries**.
12. India comes in the category of **low-income countries** because its per capita income in 2004 was just ₹ 28,000 per annum.
13. Rich countries excluding the countries of Middle East and certain other small countries are generally called **developed countries**.
14. **There are certain limitations of World Bank principles.** It does not tell us about how this average income is distributed among the people in the individual countries. Two countries with the same per capita income might be very different with regard to income distribution. One might have equitable distribution of income while the other might have great disparities between the rich and the poor.
15. The sum total of all goods and services produced within a country during a period of one year plus net income from abroad is called **national income**. It is the ratio of income of the country for a particular year to the population of that country of that year. Since countries have different populations; comparing total income will not tell us what an average person is likely to earn. Hence, we compare the **average income** which is the total income of the country divided by its total population. This average income is also called per capita income.
16.  $\text{Per capita income} = \frac{\text{Total Income}}{\text{Total Population of a country}}$   
Per capita income in India has increased from ₹ 255 in 1950-51 to ₹ 16,500 in 2000.
17. Per capita income of Punjab is much more than Kerala. And if per capita income were to be used as the measure of development, Punjab will be considered the most developed and Bihar the least developed state because per capita income of this state is very low. But the proportion of children dying in Punjab within one year of birth is 49, which is nearly five times more than Kerala where out of 1000 children born alive 11 died before completing one year of age.  
Thus, we can say that no doubt the average person in Punjab has more income than the average person in Kerala but lags behind in crucial areas, such as Infant Mortality Rate. Since per capita income of Bihar is very low, more than half of the children do not even get to go to school there.
18. The prefixing of Human before Development gives a whole new meaning to the development. It means that humans have to develop for development. It is not just income



but also the **life expectancy, education, health indicators, social infrastructure** that the country provides to its citizens constitute towards the development. The **Human Development Index (HDI)** uses a combination of development factors (such as health, education, income) for comparison.

19. The principles used by the UNDP for measuring development is different from the one used by the World Bank in the sense that it uses a combination of factors such as health, education and income as indicators of development. It does not rely solely on per capita income, as is the case with the World Bank.
20. According to the HDR (Human Development Report), health and education are the indicators of the development besides food, clothes and shelter.
21. HDR compares countries on the basis of educational levels of the people, their health status and per capita income.
22. **Sustainability of development:** Sustainability is the capacity to use the resources judiciously and maintain the ecological balance. Every generation wants to get the maximum benefits from the available resources but such a thing would be quite disastrous because the available resources shall be exhausted within a short time and the future generations will be deprived of these resources. **Environmental degradation** can be observed in different ways. Deforestation, falling levels of ground water, soil erosion, water pollution, burning of fossil fuels, the hole in the ozone layer and combustion from automobiles causing extreme air pollution especially in urban areas are some of the examples of environmental degradation.
23. **The issue of sustainability is important for development because** development must be in relation with the future. If natural resources are not sustained, then development will stagnate after a point of time. Exploiting resources unethically will ultimately undo the development that a country has achieved. This is because in the future, those resources will not be available for further progress.
24. **The earth has enough resources to meet the needs of all but not enough to satisfy the greed of even one person.** This means that there are enough resources to meet the needs of all if they are used judiciously and not over exploited by a few, and depriving the others who need them. Resources that are replenished by nature are known as **renewable resources**. For example, ground water. Resources that are not replenished that is those which will get exhausted after some time are known as **non-renewable resources**. For example, crude oil.
25. Sustainable development can be achieved by judicious use of both renewable and non-renewable resources and without harming the balance of environment keeping in mind the requirement for present and future generations.

### Words that Matter

1. **Economic development:** The term economic development means all round development of a country. Where people earn higher income and can satisfy all their needs, we can say that country is a developed country and it has developed economy.
2. **Body Mass Index (B.M.I.):** Body Mass Index is used to measure the undernourishment and overnourishment among the people.

3. **Literacy Rate:** The proportion of literate population in the 7 and above age group.
4. **Net Attendance Ratio:** Total number of children of age group 6–10 attending school as a percentage of total number of children in the same age group.
5. **Human Development Index (H.D.I.):** Human Development Index which indicates all round development of the people in the society.
6. **Economic Planning:** The deliberate action plan on the utilisation of resources of the country for economic development and for providing social justice to all.
7. **Per Capita Income:** National income of a country divided by its total population.
8. **Developed Country:** A developed country is one which possesses the characteristics of higher standard of living of the people, fuller utilisation of resources, and a modern technology.
9. **Under-developed Country:** An under-developed country is one which lacks the use of modern technology, has low per capita income of the people, and underutilisation of the resources.
10. **Life Expectancy at Birth:** Average expected length of life of a person at the time of birth.
11. **Human Development:** Development of a person according to his full capacity.
12. **Infant Mortality Rate:** The number of children that die before the age of one year per 1000 live births in that year.

## NCERT TEXTBOOK QUESTIONS SOLVED

**Q1. Development of a country can generally be determined by**

- (i) its per capita income                      (ii) its average literacy level  
(iii) health status of its people            (iv) all the above.

**Ans.** (i) its per capita income

**Q2. Which of the following neighbouring countries has better performance in terms of human development than India?**

- (i) Bangladesh            (ii) Sri Lanka            (iii) Nepal            (iv) Pakistan

**Ans.** (ii) Sri Lanka

**Q3. Assume there are four families in a country. The average per capita income of these families is ₹ 5000. If the income of three families is ₹ 4000, ₹ 7000 and ₹ 3000 respectively, what is the income of the fourth family?**

- (i) ₹ 7500                      (ii) ₹ 3000                      (iii) ₹ 2000                      (iv) ₹ 6000

**Ans.** (iv) ₹ 6000

**Q4. What is the main criterion used by the World Bank in classifying different countries? What are the limitations of this criterion, if any?**

**Ans.** The World Bank considers only the per capita income as the indicator of the development. The World Bank says that countries with the per capita income of ₹ 4,53,000 per annum and above in 2004 are called rich countries and those with the per capita income of ₹ 37,000 or less are called low-income countries.

Limitations of World Bank criterion:

- (i) It does not tell us about how this average income is distributed among the people in the individual countries.



- (ii) Two countries with the same per capita income might be very different with regard to income distribution. One might have equitable distribution of income while the other might have great disparities between the rich and the poor.

**Q5. In what respects is the criterion used by the UNDP for measuring development different from the one used by the World Bank?**

**Ans.** The criterion used by the UNDP for measuring development is different from the one used by the World Bank in the sense that it uses a combination of factors such as health, education and income as indicators of development. It does not rely solely on per capita income, as is the case with the World Bank.

According to the HDR, health and education are the indicators of the development besides food, clothes and shelter. Thus, HDR compares countries on the basis of educational levels of the people, their health status and per capita income.

**Q6. Why do we use averages? Are there any limitations to their use? Illustrate with your own examples related to development.**

**Ans.** Since countries have different populations, comparing total income does not tell us what an average person is likely to earn. Hence; we compare the average income which is the total income of the country divided by its total population. We use averages because they are useful for comparing differing quantities of the same category. For example, to compute the per capita income of a country, averages have to be used because there are differences in the incomes of diverse people.

Limitations of use of averages:

- (i) Although 'averages' are useful for comparison, they hide disparities. For example, there may be two countries A and B, where the monthly incomes may be the same. In country A, most of the people have higher incomes, but in country B, a few people are extremely rich with high income while most of the people are extremely poor with very less income. So, everybody would like to live in country 'A' because it has more equitable distribution while in country 'B' there is much difference between the income of the rich and the poor.
- (ii) Even though they are useful for comparison, they may also hide disparities. For example, the infant mortality rate of a country does not differentiate between the male and female infants born in that country. Such an average tells us nothing about whether the numbers of children dying before the age of one are mostly boys or girls.

**Q7. Kerala, with lower per capita income has a better human development ranking than Punjab. Hence, per capita income is not a useful criterion at all and should not be used to compare states. Do you agree? Discuss.**

**Ans.** Kerala, with lower per capita income has a better human development ranking than Punjab. However, it would be wrong to say that per capita income is not a useful criterion at all. Per capita income is certainly not the only criterion and it has its limitations. But this does not imply that it is not useful at all. To counter the inadequacy of this average, the human development index is used. The human development index uses a combination of development factors (such as health,



education, income) for comparison. Thus, per capita income is one of the development factors and cannot be done away with. Also, per capita income is useful for comparing the money index of states.

**Q8. Find out the present sources of energy that are used by the people in India. What could be the other possibilities fifty years from now?**

**Ans.** The present sources of energy that are used by the people of India are electricity, coal, crude oil, cow dung and solar energy. Other possibilities fifty years from now could include ethanol, bio-diesel, nuclear energy and a better utilisation of wind energy.

**Q9. Why is the issue of sustainability important for development?**

**Ans.** Sustainability of development means that development which is not only for the present times but is also for the future generations. Sustainability is the capacity to use the resources judiciously and maintain the ecological balance. Every generation wants to get the maximum benefits from the available resources but such a thing would be quite disastrous because the available resources shall be exhausted within a short time and the future generations will be deprived of these resources. The issue of sustainability is important for development because of the following reasons:

- (i) Development must be in relation with the future.
- (ii) If natural resources are not sustained, then development will stagnate after a point of time.
- (iii) Exploiting resources unethically will ultimately undo the development that a country has achieved. This is because in the future, those resources will not be available for further progress.

**Q10. "The Earth has enough resources to meet the needs of all but not enough to satisfy the greed of even one person." How is this statement relevant to the discussion of development? Discuss.**

**Ans.** This means that there are enough resources to meet the needs of all if they are used judiciously and not over exploited by a few, and depriving the others who need them. Resources that are replenished by nature are known as renewable resources. For example, ground water. Resources that are not replenished that is those which will get exhausted after some time are known as non-renewable resources. For example, crude oil. Sustainable development can be achieved by mix use of both renewable and non-renewable resources and without harming the balance of environment keeping in mind the requirement for present and future generations.

**Q11. List a few examples of environmental degradation that you may have observed around you.**

**Ans.** Environmental degradation can be observed in different ways. Deforestation, falling levels of ground water, soil erosion, water pollution, burning of fossil fuels, the hole in the ozone layer and combustion from automobiles causing extreme air pollution especially in urban areas are some of the examples of environmental degradation.

- Q12. For each of the items given in the table below, find out which country is at the top and which is at the bottom.

Table: Some data regarding india and its neighbours for 2004

Country	Per Capita Income in US\$	Life Expectancy at Birth	Literacy Rate for 15+ years Population	Gross Enrolment Ratio for Three Levels	HDI Rank in the World
Sri Lanka	4390	74	91	69	93
<b>India</b>	<b>3139</b>	<b>64</b>	<b>61</b>	<b>60</b>	<b>126</b>
Myanmar	1027	61	90	48	130
Pakistan	2225	63	50	35	134
Nepal	1490	62	50	61	138
Bangladesh	1870	63	41	53	137

- Ans. (i) *Per Capita Income in US\$*: Top country—Sri Lanka; Bottom country—Myanmar.  
 (ii) *Life Expectancy at Birth*: Top country—Sri Lanka; Bottom country— Myanmar.  
 (iii) *Literacy Rate for 15+ years Population*: Top country—Sri Lanka; Bottom country—Bangladesh.  
 (iv) *Gross Enrolment Ratio for Three Levels*: Top country—Sri Lanka; Bottom country—Pakistan.  
 (v) *HDI Rank in the world*: Top country—Sri Lanka; Bottom country—Nepal.

- Q13. The following table shows the proportion of undernourished adults in India. It is based on a survey of various states for the year 2001. Look at the table and answer the following questions.

State	Male (%)	Female (%)
Kerala	22	19
Karnataka	36	38
Madhya Pradesh	43	42
<b>All States</b>	<b>37</b>	<b>36</b>

- (i) Compare the nutritional level of people in Kerala and Madhya Pradesh.  
 (ii) Can you guess why around 40 per cent of people in the country are undernourished even though it is argued that there is enough food in the country? Describe in your own words.

- Ans. (i) The nutritional levels of people in Kerala and Madhya Pradesh are different. While 22% and 19% men and women respectively are undernourished in Kerala, the respective percentages of male and female undernourishment in Madhya Pradesh are 43% and 42%. This implies that Kerala has better nourished people than Madhya Pradesh. Also, the undernourishment average for Madhya Pradesh is greater than that for the entire country, while that for Kerala is lower than the national average.  
 (ii) Despite the presence of adequate food in the country, around 40% of Indians are undernourished. This is because of the erratic and unsystematic distribution of food. Some states in the country ensure smooth running of ration shops and other forms of Public Distribution System (PDS). The supply



# Jagat taran golden jubilee school

Class 10th session 2020- 21

Subject History/ Civics

## Assignment 3



Nationalism in Europe - Class 10

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### What did Liberal Nationalism stand for?

**In Economic Sphere, freedom of market and abolition of state-imposed restrictions on free movement of goods.**





## What did Liberal Nationalism stand for?

**For New Middle Classes:** Freedom for the individual, equality before law and right to property.



The educated, liberal middle class started demanding Liberal nationalism.



**Napoleon's administrative measures had created the following-**

**There were 39 princely states.**

**Different currencies & Measurements.**

**Custom duty varied from 5% to 11%**

## **Outcomes of Treaty of Vienna**

- ◆ **Bourbon<sup>x</sup> dynasty was restored.**
- ◆ **A series of states were formed on the boundaries of France.**



# Outcomes of Treaty of Vienna

Genoa was added to Piedmont in the south.



SuccessCDs

## Outcomes

- ◆ Kingdom of Netherlands including Belgium in the North was formed.



SuccessCDs

# Outcomes

- ◆ Prussia was given new territories in the western frontier.



SuccessCDs

# Outcomes

- ◆ Austria was given northern Italy.



SuccessCDs

## Outcomes

- ◆ Germany & confederation of 39 states was left untouched.



## Outcomes

- ◆ Russia was given a part of Poland. Prussia was given Saxony.





## Conservative Regime

- ◆ Autocratic. ✓
- ◆ Censorship laws on newspapers, magazines.
- ◆ Curbed revolutionary activities.

### Achievements of Zollverein

1. Tariff barriers were abolished.
2. Reduced currencies from 30 to 2 ✓
3. Creation of railway network.

39



See Democratic Politics II on DIKSHA at



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**For Civics chapter 2 Federalism  
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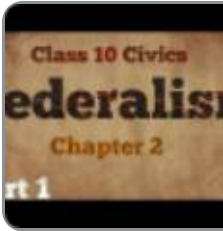
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**Important questions for History**

1. What did liberal nationalism stand for?
2. Who headed the treaty of Vienna? What were its outcomes?
3. Who were zollverein? what initiative was taken by them?
4. Which was the most dominant class in European society? Explain some of their characteristics.
5. Discuss the the administrative reforms Set up by Napoleon

**Important questions for Civics**

1. What are certain features of Federalism?



- 2. Explain the federal division of power between centre and state.**
- 3. How Federalism is practiced in India?**

Last modified: 6:25 am

**J.T. GOLDEN JUBILEE SCHOOL,  
PRAYAGRAJ.**

**SESSION:**

**2020-2021**

**CLASS: X**

**SUBJECT: I.T**

**TEACHER: Neha Jaiswal**

**ASSIGNMENT III**

**STUDY MATERIAL**

**Lesson 1: Communication skills**

**Thoroughly go through the chapter given below.**



## COMMUNICATION SKILLS - II

### Learning Objectives

After studying this chapter, students will be able to:

- Demonstrate knowledge of various methods of communication – verbal, non-verbal & visual.
- Provide descriptive and specific feedback.
- Apply measures to overcome barriers in communication.
- Apply principles of communication skills.
- Demonstrate basic writing skills.

## 1.1 VARIOUS METHODS OF COMMUNICATION

### INTRODUCTION

As discussed in the previous book, we human beings are bestowed with the quality to communicate. Communication allows us to express our needs, wants, and other things to humans or animals. Communication can be carried out by auditory means, such as speaking, singing, and sometimes tone of voice, and non-verbal, physical means, such as body language, sign language, paralanguage, touch, eye contact, or the use of writing (only with another literate person).

Human beings communicate with other humans, in different mediums —vocally (using voice), written (using printed or digital media such as books, magazines, websites or emails), visually (using logos, maps, charts or graphs) or non-verbally (using body language, gestures and the tone and pitch of voice).

Whatever be the medium, communication still means that some message is being transferred from one source (sender of the message) to the chosen target (receiver of the message). The question arises: whether the message transmitted from the source to the target is received and interpreted correctly or misinterpreted. Since ages, communication experts and social scientists have been fascinated by the process of communication, which is not limited to human beings, or even all living creatures, but may also be carried out between machines or parts of machines; some seek communication with beings from other planets or *extraterrestrial life*; or the religious communication that is perceived to take place between beings in the spiritual world and even God!



## SESSION 1 VERBAL COMMUNICATION

Verbal communication enables us to share our thoughts with others by using words in a mutually understandable language such as English, Hindi, Urdu, Chinese, French or Spanish. Language plays an important role in verbal communication. In simple words, language is a syntactically organised system of signals, such as voice sounds, intonations or pitch, gestures or written symbols which help in communicating our thoughts or feelings. Our verbal communication can be done either in a written or oral mode. The spoken and written languages that we use as part of our day-to-day activities can be described as a system of symbols also known as *lexemes* and the grammars (rules) by which the symbols are manipulated. In fact, language learning is normal in human childhood. Most human languages use patterns of sound or gesture for symbols which enable communication with others around them.

In spite of various advantages of language based verbal communication, including written and oral communication, one of its disadvantages is that it is NOT an independent mode as it always depends on words of a common language for information shared between the sender and the receiver.

Components that make verbal communication effective are—language competency, vocabulary, general awareness, domain knowledge (in your case Information Technology) and listening. See figure 1.2.

- **Listening** : It is the most important of all the five components mentioned above. In fact, listening is a key component of our learning process.
- **Language competency** : Language competency, including grammar, is an indicator of our comfort level with the language you use to express our thoughts.
- **Vocabulary** : It reflects how comfortable you are with your working language. It helps in the usages of suitable words in different contexts.
- **General awareness** : It is your awareness about your surroundings including latest events in the world around you. It gives you the confidence to communicate with conviction.
- **Domain knowledge** : It is your expertise in your chosen area – arts, commerce, science etc. Being well informed about the latest happenings helps you to communicate with confidence.

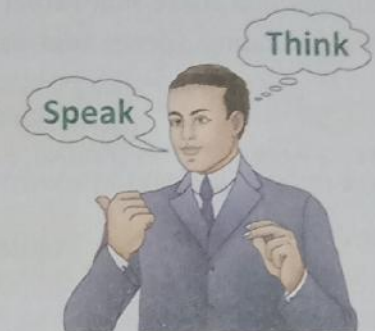


FIG. 1.1: OUR BRAIN FIRST 'THINKS' OF SPOKEN AND WRITTEN LANGUAGES THEN WE ACTUALLY SPEAK OR WRITE ANYTHING

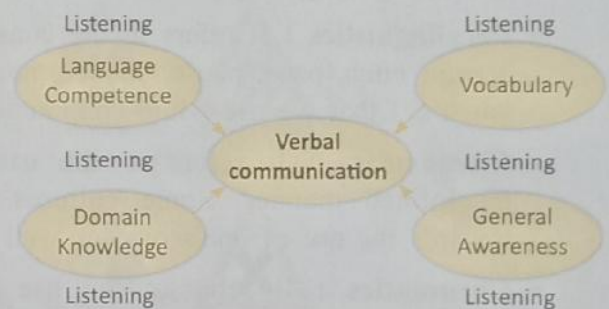


FIG. 1.2: COMPONENTS THAT MAKE VERBAL COMMUNICATION EFFECTIVE

## SESSION 2 NON-VERBAL COMMUNICATION

Non-verbal communication enables us to share our thoughts with others by using anything other than words. Hence, this non-word or non-verbal communication is an act of imparting or interchanging thoughts, posture, opinions, or information without the use of words, using gestures, sign language, facial expressions, and body language etc. This may also include 'object communication' or 'symbolic communication of objects' such as colour, clothing, hairstyles, smell, time, ambience and even architecture (of the place where communication takes place). Interestingly, your speech may also contain non-verbal elements such as paralanguage, including voice modulation, pace, pitch, emotion and speaking style, as well as prosodic



features such as rhythm, intonation and stress. Similarly, written texts too have non-verbal elements such as handwriting style, spatial arrangement of words, or the use of emoticons. Components that make non-verbal communication effective are –body language, proxemics, kinesics, haptics, vocalics (including silence and pauses), Chromatics, chronemics and olfactics. See figure 1.3.

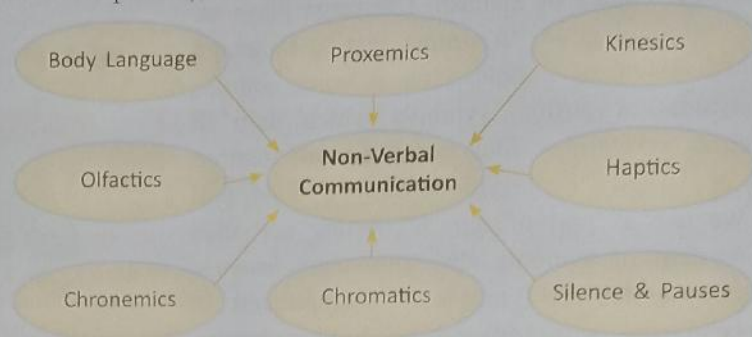


FIG. 1.3: COMPONENTS THAT MAKE NON-VERBAL COMMUNICATION EFFECTIVE

- **Body Language** : It is a complex mixture of gestures, movement, posture, and tone of voice.
- **Kinesics** : It refers to the interpretation of the movement of the body or its separate parts which may be culture bound.
- **Proxemics** : It refers to how we use physical space in our day-to-day interaction with others.
- **Haptics** : It refers to communicating our emotions through touch such as formal handshake, affectionate hug, angry slap or frivolous peck through which people achieve a sense of connection.
- **Paralinguistics** : It refers to the conscious or unconscious use of vocal sounds such as intonation, accent, pitch, pace, pause, silence, noise, and voluntary or involuntary actions (such as laughter and yawning) that we use while communication through spoken method.
- **Chronemics** : It refers to the use of time in a disciplined manner. Some cultures are very strict towards the use of one's own as well other's time.
- **Chromatics** : It refer to the use of colours and the meanings they convey. Colours are perceived differently in different cultures.
- **Olfactics** : It refers to our sense of smell. Different types of smells impacts our brains in different manner.

In spite of various advantages of non-verbal communication, one of its disadvantages is that it is NOT an absolute language that can be interpreted same by both the sender and the receiver.

It is highly subjective and dependent on the context and culture that sometimes may not be same for the sender and the receiver. For example, the three colours used in our National flag—deep saffron (*kesari*) at the top, white in the middle and dark green at the bottom, represents strength and courage of the country (Saffron colour); the white middle band indicates peace and truth with *Dharma Chakra*; and the green colour shows the fertility, growth and auspiciousness of our motherland.

Non-verbal communication is also very important in the context of inter-cultural communication. Taking into account the differences in interpretation of different events, items, or words, sometimes becomes a sensitive issue and may result in cross-cultural communication barriers. This is because objects or things

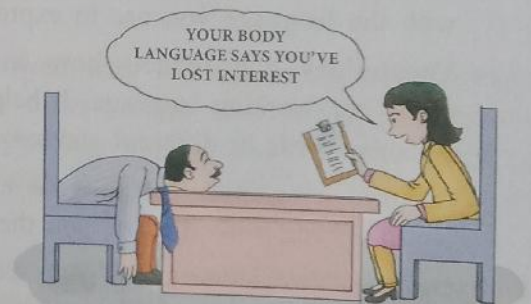


FIG. 1.4: YOUR BODY LANGUAGE SPEAKS IT ALL!

that are seen as neutral and inoffensive in one culture can be a taboo or offensive in others. For example, the *thumbs-up gesture* is commonly used in many cultures to signify a job well done. However, if it is used in Australia, Greece, or the Middle East — especially if it is thrust up as a typical hitchhiking gesture, it would be taken as an obscene gesture.



FIG. 1.5: HAND GESTURES MEAN DIFFERENT THINGS IN DIFFERENT CULTURES

### SESSION 3 VISUAL COMMUNICATION

Visual communication (also known as graphic communication) enables visual presentation of the information. It has often been said that a picture is worth a thousand words. This is true of graphs, charts and other graphic and visual aids. This method of communication depends heavily on one's vision. This third type of communication method, may make use of both verbal and nonverbal communication. It takes place with the aid of visual elements. There are many forms of visual communication. Some commonly used visual communication forms are: public signs, visual symbols, tables, charts, graphs, maps, icons and emoticons. The very fact that visual matters or subjects make a permanent effect in the mind of an audience, visual communication is widely used for its added advantage.



FIG. 1.6: PUBLIC SIGNS & ICONS



The reasons why this method of communication is so popular these days is due to the following reasons:

1. It supports our information by backing up what we say. It brings receiver's attention to the information we are sharing.
2. It clarifies the meaning of our discussion, oral or written, by providing its visuals, which immediately registers in the receiver's brain.
3. It allows gain and regain of our audience's attention because graphic or visual aids can break the monotony that might have crept in due to listening or reading for an extended period.
4. It adds variety to our written or oral presentation. Listening to the same voice or reading long pages of text can be very boring.

In spite of various advantages of visual communication methods, some of its disadvantages are:

1. **Limited Scope:** All topics or subject matters cannot be presented through visual communication. Plan, policy, systems, rules, order and recommendation of an organisation cannot be produced in terms of visual communication.
2. **Too Brief:** A complete and detailed information cannot be displayed through this communication method.
3. **Not Easy to Understand:** Drawing, graphs, charts or symbols may not convey any message to people who don't have specialised knowledge of the subject matter. Special knowledge and efficiency are required to deal with visual communication. For example, drawing of a building or a sketch of a bridge may not be clear to general people but engineers, architects and technical persons can easily deal with such situation.
4. **Not Cost Effective:** To use graphs, pictures, charts, drawing, cartoons and sketch is not cost effective. All these require various tools and techniques which are costly.
5. **Prone to Misinterpretation:** Sometimes information displayed in terms of icons, emoticons, graphs, charts or tables may be in wrong order. Decisions taken on the basis of such information may lead to ineffective outputs or fruitless results.

## SUMMARY

- Communication allows us to express our needs, wants, and other things to humans or animals.
- The three most commonly used methods of communication are: (1) verbal communication, (2) non-verbal communication and (3) visual communication.
- Verbal communication enables us to share our thoughts with others by using words in a mutually understandable language.
- Our verbal communication can be done either in a written or oral mode.
- Non-verbal communication enables us to share our thoughts with others by using anything other than words.
- It is an act of imparting or interchanging thoughts, posture, opinions, or information without the use of words, using gestures, sign language, facial expressions, and body language etc. It may also include 'object communication' or 'symbolic communication of objects' such as colour, clothing, hairstyles, smell, time, ambience and even architecture (of the place where communication takes place).
- Visual communication (also known as graphic communication) enables visual presentation of the information. It has often been said that a picture is worth a thousand words.

## SELF ASSESSMENT

### A. Multiple choice questions.

- Which of the following is not a method of communication?  
(a) Body language (b) Mountain view (c) None of these
- Which of the following is NOT verbal communication?  
(a) Pie chart (b) Our tricolor National Flag (c) Extempore

### B. Answer the following questions.

- Define verbal communication.
- Give two examples of non-verbal communication.
- What are the disadvantages of visual communication?

### C. Activity.

Observe your friend/teacher for a week and write in 50 words how he/she maintains the space language (distance) with others.

## 1.2 PROVIDE DESCRIPTIVE AND SPECIFIC FEEDBACK

### SESSION 1 COMMUNICATION CYCLE AND IMPORTANCE OF FEEDBACK

Communication cycle comprised of the following eight components:

- **Sender (source):** Also known as the 'source'. He/she is the person who wants to send the information.
- **Idea:** The information or ideas the source/sender wants to share with the receiver (also known as 'target').
- **Message:** This is the actual piece of information that is intended to be sent from the source/sender to the target/receiver.
- **Encoding:** Here, the source/sender selects a common language that can be understood by the target/receiver and encodes (converts into mutually understandable language) the information.
- **Communication channel:** The source/sender selects an appropriate medium or channel, such as a face-to-face dialogue, letters, faxes, telephone calls, electronic mails, and so on, to transfer the information to the target/receiver.
- **Receiver (target):** The receiver or the target to whom the information is intended to be sent.
- **Decoding:** Here, the target/receiver interprets (comprehends) the information that was encoded and sent by the source/sender.
- **Feedback:** The target/receiver's response (or non-response) to the source/sender's information.

See figure 1.7

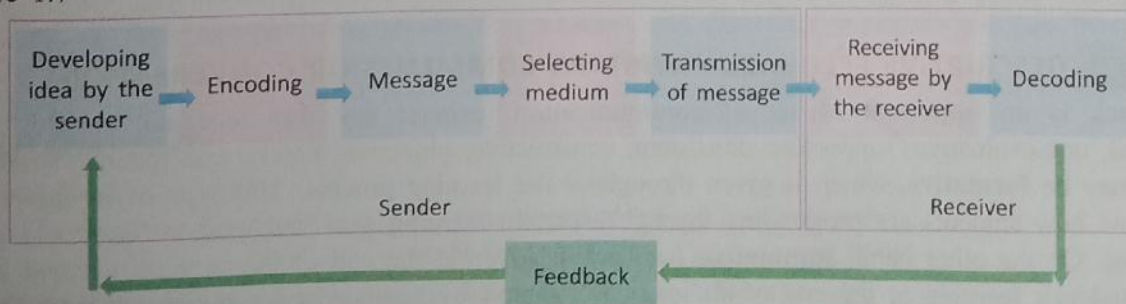


FIG. 1.7: EIGHT COMPONENTS OF A COMMUNICATION CYCLE



In the entire process of communication process mentioned above, 'noise' may surface at any point of time as an obstacle or disturbance in communication. It may be verbal or non-verbal, physical or mental, audible or inaudible. Though, undesirable, it is a part and parcel of communication process. Hence, you may try to minimize this element of 'noise' still it cannot be totally eliminated.

## SESSION 2 MEANING AND IMPORTANCE OF FEEDBACK

Of all the eight components mentioned above, the last one is 'feedback', which is essential in communication so as to know whether the receivers have understood the message in the same terms as intended by the speaker. Feedback includes both verbal and non-verbal communication and takes formal and informal forms. Formal feedback includes written comments and structured feedback, while informal feedback tracks casual verbal comments and actions. Sometimes, a feedback could be a non-verbal cue, such as smiles, sighs, etc., while at other times, it can simply be silence—showing agreement or disagreement. In fact, feedback is the receiver's response, which enables the sender to evaluate the effectiveness of his/her message.



FIG. 1.8: FEEDBACK COMPLETES A COMMUNICATION PROCESS

Hence, it would not be an exaggeration to say that feedback is the livewire of communication just as communication is the livewire of human existence and interaction. The process of communication finishes only when the cycle ends with feedback. Given below are some of the aspects that make feedback so important in any form of communication – verbal, non-verbal or visual:

1. Feedback completes a communication process.
2. Feedback enables us to evaluate the effectiveness of our message.
3. Feedback makes communication meaningful.
4. Feedback makes the sender of the message know if he/she is really making sense to what he/she is communicating.
5. Feedback is a basis for measuring the effectiveness of communication.
6. Feedback is the end-result of an idea and makes communication a continuous process.
7. Feedback is a basis for future planning on what next needs to be done for the attainment of the set goal.
8. Feedback paves way for new idea generation.

## SESSION 3 DESCRIPTIVE FEEDBACK – WRITTEN COMMENTS OR CONVERSATIONS

As feedback is an important aspect of communication, experts say that feedback should be multi-dimensional, non-evaluative, supportive, consistent, constructive, objective, timely, and specific. They say that feedback may be **formative**, which is given throughout the learning process. This type of feedback is meant to determine how students are progressing through a certain learning goal and used to 'correct' a person of his mistakes. On the other hand, **summative** feedback is given at the end of the year or unit and is used to evaluate student's learning at the end of an instructional unit by comparing it against some pre-determined criteria. This type of feedback is meant to 'evaluate' a person and accordingly 'reward' him for his good



actions or 'punish' for his mistakes. For example, when you write in a bad handwriting, your teacher gives you a formative feedback saying "improve your handwriting to get better marks in your examinations". Similarly, when you write in bad handwriting and your teacher fails you in your examination, she gives you a summative feedback (in the form of less marks which fails in the examination of that particular subject).

Besides, feedback can be **descriptive** or **prescriptive** in nature. Descriptive feedback merely identifies or describes one's action – *good* or *'not-so-good'*. For example, your teacher may say that "your communicating style is good," or "your verbal communication and non-verbal communication are incongruent or not-so-good." On the other hand, **prescriptive** feedback provides you advice on *how* you should communicate. For instance, after a speech which you believe was ineffective, you ask your teacher, "Mam, how was my speech?" Your teacher responds saying "You spoke very fast and your pronunciation was not clear. You should slow down your speaking speed, and also practice your pronunciation."

#### SESSION 4 SPECIFIC AND NON-SPECIFIC FEEDBACK

Apart from the above, feedback may be specific or non-specific (or generic). Specific feedback provides detailed and complete information on what you did well or poorly. For example, after listening to your argument in a debate competition, your teacher may say, "The way you mentioned all the points in a logical order to convey your viewpoint on the issue was very well organised." On the other hand, if your teacher were to give you a non-specific or generic feedback, he/she would have simply said, "good job" or "you did great."

Specific feedback helps in modifying your thinking or behaviour for the purpose of learning by influencing your thought process while non-specific feedback, for the most part, is not very helpful.

#### SUMMARY

- Communication cycle comprises following eight components: (1) Sender/source, (2) Idea, (3) Message, (4) Encoding, (5) Communication channel, (6) Receiver/target, (7) Decoding, (8) Feedback.
- Of all the eight components, the last one is 'feedback', which is very essential in communication as it enables the sender to know whether the receiver(s) have understood the message he/she has sent.
- Feedback may be given in both verbal and non-verbal manner and can be formal and informal in nature.
- Feedback may be **formative** or **summative**. Where formative feedback is meant to determine how students are progressing through a certain learning goal and used to 'correct' a person of his mistakes, summative feedback is meant to 'evaluate' a person and accordingly 'reward' for his good actions or 'punish' for his mistakes.
- Similarly, feedback can be **descriptive** or **prescriptive** in nature. Descriptive feedback merely identifies or describes one's action – *'good'* or *'not-so-good'* while prescriptive feedback provides an advice on *how* one should improve oneself.
- Apart from the above, feedback may be **specific** or **non-specific** (or generic). Specific feedback provides detailed and complete information on what one does well or poorly, non-specific or generic feedback just says whether one is good or bad at something.

#### SELF ASSESSMENT

##### A. Multiple choice questions.

1. Which of the following is NOT one of the components of communication cycle?  
(a) Discipline (b) Medium (c) Target
2. Which of the following cannot be totally absent in a communication process?  
(a) Light (b) Sound (c) Noise



3. Which of the following is NOT a type of feedback?  
(a) Summative (b) Prescriptive

(c) None of these

**B. Answer the following questions.**

1. What are the components of a communication cycle?
2. Define feedback.
3. What do you understand by descriptive feedback?

**C. Activity.**

Observe your teacher for a week and write in 50 words what kind of feedback he/she gives on your written or spoken assignment.

## 1.3 MEASURES TO OVERCOME BARRIERS IN COMMUNICATION

### SESSION 1 BARRIERS TO EFFECTIVE COMMUNICATION – TYPES AND FACTORS

Anything that prevents smooth dissemination (sending) or comprehension (receiving) of a message, either at the sender's end or receiver's end, is a barrier to communication. Such barriers cause communication failures. Communication barriers may pop up at any stage and create misunderstanding and ambiguity. For example, the sender of a message who is not conversant with the language known to his receiver may use erroneous or fragmented language, thus causing a communication barrier. Likewise, a receiver who is distantly located from where the sender is disseminating some important information may either receive the message late (if sent using traditional modes such as the ordinary post) or, if sent through a succinct telegram, only partially understand the essence of it. Sometimes, the environment in which communication takes place may also result in barriers—a noisy or filthy ambience; tense receivers; an ineffective means of communication or an incorrect choice of the mode of communication.

#### Types of Communication Barriers

From the above mentioned characteristics, we understand that communication barriers may be of the following three types:

1. **Intra-personal Communication Barriers**
2. **Inter-personal Communication Barriers**
3. **Environment-based Communication Barriers**

1. **Intra-personal Communication Barriers:** Several factors present within us can sometimes pose a hurdle in our communication—both in sending and receiving messages. These barriers are within our own control, which means we can deal with them on our own and overcome them. These barriers may be caused due to broader factors such as specific socio-economic and cultural backgrounds. For instance, an individual who has been born and brought up in a closed culture will be less expressive and hesitant in conveying feelings—both happy and sad—than another individual who comes from an open culture. Likewise, an individual who has received prejudiced treatment from other people—in the family, at the workplace or society at large—is likely to develop either selective perception or a judgemental attitude.
2. **Inter-Personal Communication Barriers:** These factors are present outside an individual's own self—outside the individual's control. They may either be related with the other person (or persons) one is communicating with (*receiver-centric*) or they may be due to the individual's own shortcomings



(*sender-centric*), or both. These interpersonal communication barriers may surface due to various known or unknown external elements such as:

- lack of trust towards the sender of the message or the lack of credibility of the message itself;
  - aggressive or disruptive message delivery by the sender;
  - incompatible language competency between the sender and the receiver of the message or excessive use of technical terms (jargon);
  - incorrect selection of the medium for the dissemination of the message.
3. **Environment-based Communication Barriers:** These factors lie outside the eight components of the communication cycle; they are in the surroundings or external environment where communication takes place. They may be related with the noisy or non-conducive communication climate; a physical or chromatic (time-related) issue pertaining to a particular society/culture; an ethical or social concern, a technological glitch, etc. These environmental barriers may result due to various elements both within and beyond control, such as stuffy rooms with poor seating arrangements, a huge and unmanageable audience; a screeching microphone or excessively interruptive telephone/mobile phone; incompatible computer software or snail-paced Internet connection. For example, a sender who wants to send an urgent message about his ill health which doesn't allow him to go for work, tries to call his colleague but his cell phone has been switched off and his landline telephone is out of order. This prevents him from sending messages to the desired person at desired time.

#### Factors Causing Communication Barriers

1. **Lack of planning:** If a message is communicated without adequate planning, then the desired result may not be obtained. Therefore, one would need to plan in advance before drafting his/her messages.
2. **Lack of trust:** The relationship between the sender and the receiver plays an important role in a communication situation. A slight lack of trust or understanding between them may cause a communication barrier.
3. **Ambiguity:** It refers to the difficulty of understanding or explaining something because it involves making different inferences. Therefore, it is quite possible that the receiver does not correctly understand the meaning intended by the sender. An incorrect inference is often drawn because the message yields more than one meaning.
4. **Distortions:** It refers to twists or changes in facts or ideas in a message such that they are no longer correct or true. Much of communication does not succeed because the receiver distorts the sender's original ideas to suit own convenience. While the sender believes that the message has been delivered correctly and the desired action will follow, the truth is that the receiver has not taken it in its original form.
5. **Implied meanings:** Messages may not always convey a meaning in a straight forward manner. If the socio-economic and cultural backgrounds of the sender and the receiver are not similar, then it is possible that the latter does not uncover the implied meaning. For example, a reference to the weather in the middle of a conversation on another topic, is often indicative of the sender's desire to change the topic of discussion.
6. **Noise:** It is used to describe any information that is not wanted and that can make it difficult for important or useful information to be understood clearly. Noise is a major barrier to communication. The word 'noise' also refers to all kinds of physical interference, like illegible handwriting, blemished copies of typescripts, poor telephone connections, slow Internet connections and so on.



5. **Time and distance:** Time and distance also act as barriers to the smooth flow of communication. Use of telephones, along with computer technology, has made communication very fast and has, to a large extent, overcome the space barrier. However, technical glitches sometimes may make these facilities ineffective. In such cases, the physical distance between the sender and the receiver becomes a strong barrier. Even where the physical distance does not matter much, such as a closed room, a faulty seating arrangement can also become a barrier to effective communication.

## SESSION 2 MEASURES TO OVERCOME BARRIERS IN COMMUNICATION

Now as we know the different barriers of communication, let's try to understand, the different measures that we could take to overcome those barriers:

- **Never go unprepared:** Very often, the lack of preparation results either from the scarcity of relevant information about a topic or an incorrect audience analysis. Insufficient audience analysis, however, may certainly lead to a communication failure.
- **Give required time:** In the present-day life, time is always at a premium and if the sender of the message compromises by not giving the required time for preparation or dissemination of the message, the receiver(s) is sure to face problems.
- **Work on language competency to overcome linguistic deficiency:** Language plays an important role in any inter-personal communication where both the sender and the receiver must be reasonably comfortable in the language used. This is because in any communication process—oral or written, the sender(s) *encode(s)* ideas, which the receiver(s) *decode(s)* to understand and give feedback accordingly. Any lapse on either side may lead to a communication failure.
- **Avoid false assumptions:** Most often, communication fails because the sender of the message fails to communicate instructions well because he or she assumes that the receiver(s) understood what they have said, but the fact could be that the receiver did not understand anything that was communicated to them or partially understood; both situations are undesirable in a smooth communication process.
- **Don't be overconfident:** When a person—a sender or a receiver—thinks that he/she knows all about a subject, he/she runs the risk of overconfidence. This mindset causes a person to be unwilling to learn new ideas. It is the best to approach communication with humility and a willingness to learn, for it is almost impossible to know everything about any particular area.
- **Don't be apathetic:** Apathy causes communication to break down because it interrupts effective listening. It is for this reason that an apathetic speaker does not relate information well and may leave out key points.
- **Don't be fearful and defensive:** When a sender is fearful or defensive about the subject matter that needs to be communicated to somebody, the sender may go too far in the attempt to communicate and alienate the receiver(s) with melodramatic gestures and words. Instead of accepting the mistake, the sender might try to justify the action or refuse to admit the mistake altogether, creating further misunderstanding. Such defensive behaviour may also ruin the sender's credibility with receiver(s). Likewise, when a receiver is fearful, he or she may not understand what is being said, leading them to stop listening, which would lead to more mistakes in future.
- **Don't be egocentric:** It is an attitudinal barrier wherein one tends to feel that one's own ideas are more important or valuable than those of the others. This attitude may cause harm as it alienates an egocentric person from others. For example, an egocentric manager may miss out on the creativity and variety of ideas that their subordinate could contribute to a project, and (in an extreme situation) may also lose qualified and experienced employees to a rival company.



- **Avoid Judgemental attitude:** Many communication failures occur because the message tends to pass some sort of judgement against the receiver. Therefore, it is not received at its face value. Giving precedence to the expression of opinion over facts and the use of offensive or annoying expressions ensure that the receiver becomes guarded and defensive.
- **Show respect towards the receiver(s) of the message:** Make sure that there is mutual respect between the sender and the receiver for a successful communication. This mutual respect allows each party to invest time in speaking/listening to the other party.

## SUMMARY

- Anything that prevents smooth dissemination (sending) or comprehension (receiving) of a message, either at the sender's end or receiver's end, is a barrier to communication.
- Communication barriers may be commonly of three types: (1) Intra-personal Communication Barriers, (2) Inter-personal Communication Barriers, and (3) Environment-based Communication Barriers.
- Factors that cause communication barriers are: (1) Lack of planning, (2) Lack of trust, (3) Ambiguity, (4) Distortions, (5) Implied meanings, (6) Noise, (7) Time and distance.
- Different measures that we could take to overcome communication barriers are:
  1. Never go unprepared
  2. Give required time
  3. Work on language competency to overcome linguistic deficiency
  4. Avoid false assumptions
  5. Don't be overconfident
  6. Don't be apathetic
  7. Don't be fearful and defensive
  8. Don't be egocentric
  9. Avoid judgemental attitude
  10. Show respect towards the receiver(s) of the message.

## SELF ASSESSMENT

### A. Multiple choice questions.

1. Communication barrier is:
  - (a) Anything that prevents the smooth dissemination (sending) or comprehension (receiving) of a message, either at the sender's end or receiver's end.
  - (b) Elements causing communication failures, which may have serious effects on one's personal and professional relationships.
  - (c) All the above.
2. Ambiguity refers to:
  - (a) Difficulty in understanding or explaining something
  - (b) Difficulty in comprehension caused by making different inferences
  - (c) Both (a) & (b)

**B. Answer the following questions.**

1. What do you mean by communication barriers?
2. Explain environment-based communication barriers with two examples?

**C. Activity.**

With the help of a chart paper, glue stick, colourful sketch pens and newspaper clippings make a collage depicting communication barrier.

## 1.4 PRINCIPLES OF COMMUNICATION

### SESSION 1 PRINCIPLES OF EFFECTIVE COMMUNICATION

Today, we are in a knowledge-based economy, which is also referred to as 'the fourth economy'. The nature of the world in which we live—one that is weird, connected, mobile, fast-paced—has changed in some not-so-subtle ways in recent years. Many studies and surveys conducted in various areas indicate that effective communication is very important for individual as well as organisational success. By its very nature, it forms the basis for establishing cooperative and supportive relationships between machine operators, floor managers, supervisors, shop floor workers, co-workers, clients, vendors, suppliers and almost all stakeholders; reducing friction and minimizing work-relation conflicts.

People who are good communicators are more successful in advancing their careers, if all other factors remain equal. Think about the people who have inspired you in some way or the other in your personal or professional life. They may be your parents, teachers, close relatives, friends, or political leaders. In addition to having other qualities, these people are probably very good communicators. When they speak to a group, send a letter, or talk face-to-face, their messages are thought-out, focused, and purposeful. They use every communication opportunity to engage people, share information, or advance their agenda.

### SESSION 2 7Cs OF EFFECTIVE COMMUNICATION

We communicate all day long; at home, at work, with our next-door neighbour and at the sports club. We communicate verbally, non-verbally and in writing. Whether we communicate in written or oral, or audio or visual, or audio-visual mode, it is important that we follow the 7Cs of effective communication (also known as the seven principles of communication). These 7Cs of effective communication provide a useful checklist as given below:

- 1. Clear information:** Choosing appropriate words and phrases to convey ideas in the form of a message is very important. For this you need yourself to be fully clear of what exactly your message is, what the objective of your message is, and to whom you are going to share it with. Some of the ways of ensuring clarity of expressions could be:
  - Choosing short familiar words (conversational)
  - Constructing effective sentences and paragraphs keeping unity, coherence and the emphasis of the message in mind
  - Achieving appropriate acceptability/readability by adopting receiver-centric approach
  - Including appropriate examples and illustrations in support of the message
- 2. Complete information:** Completeness of information is very important as it brings the desired results without additional messages; builds goodwill; averts lawsuits and answers all questions—the



5 Ws: who, what, when, where, why (and how). Offering complete and relevant information makes a communication effective as it rules out the need of another cycle of communication to clarify issues.

3. **Concise message:** In this fast paced world, every person lacks time. Hence, it is necessary to keep the message crisp and concise. It adds not only to the efficacy of the message but also saves the receiver's time in understanding it. Lengthy messages are not only boring but are also distracting to the receiver. Some of the ways of ensuring the conciseness of a message could be:
- Cutting out wordy phrases and sentences
  - Including only relevant information
  - Doing away with faulty/unclear pronoun usage: 'it is', 'this is', 'there is', etc.
  - Sparing usage of abstract subjects and passive verbs
4. **Concrete and coherent presentation:** Concrete and coherent messages facilitate easy understanding and produce the desired result. Hence, sender should be careful of not jumbling too many ideas into an incoherent presentation as it may lead to nothing but confused thinking and branching off from the main streams of thought. This can be ensured by being detailed instead of vague, using specific facts and figures, using the active and passive voice judiciously, using action verbs instead of smothered expressions and using concrete nouns instead of abstract nouns.
5. **Correctness of facts:** Nothing could be more dangerous than an incorrect message. Make sure that whatever you communicate is correct to the best of your knowledge. This can be ensured by using the right level of language—formal/informal, acceptable/substandard; presenting accurate facts, words, and figures after extensive proofreading; following acceptable writing mechanics—no spelling errors or careless omissions; choosing of non-discriminatory expressions—treating men and women equally.
6. **Consideration of the message and the receiver:** For the communication success, it is important that you prepare the message with your receiver(s) in mind, unless the receiver of your message has made a mistake or has a different opinion; emphasising the receiver's takeaway (benefits) from the communication, showing interest in the receiver, emphasising positive, pleasant facts, and ensuring honesty and integrity in your message.
7. **Courtesy towards receiver:** The absence of 'mutuality of thought' in communication may result in disbelief, which may lead to a complete failure in communication. Some steps towards showing courtesy to the receiver are—being sincerely tactful, thoughtful, and appreciative, omitting rude expressions (not talking down), minimising slang and jargon, granting and apologising good naturedly, giving feedback promptly and, above all, giving the receiver due respect so that he believes in what you say.

### SUMMARY

- People who are good communicators are more successful at advancing their careers, if all other factors remain equal.
- Whether we communicate in written or oral, or audio or visual, or audio-visual mode, it is important that we follow the 7 Cs of effective communication (also known as the **seven principles of communication**), which is a useful checklist that one should ensure in his/her communication: (1) Clear information, (2) Complete information, (3) Concise message, (4) Concrete and coherent presentation, (5) Correctness of facts, (6) Consideration of the message and the receiver, and (7) Courtesy towards receiver.



## Class X

### Computer (IT)

#### Ch. Communication Skills - II

Do following questions in your note book.

#### A. Short Question.

- (1) What are intra-personal communication barriers?
- (2) What are the advantages of visual communication?
- (3) Why is feedback so important in any communication process?
- (4) What measures could be taken to overcome communication barriers?

#### B. Long Questions.

- (1) Explain communication cycle briefly.
- (2) Explain any five factors causing communication barriers.
- (3) Explain the 7Cs of effective communication.