Subject: English
Class- X
Work sheet -3
Tenses

Date:-24/04/2021

# Q1. Fill in the blanks with the correct form of verb

1. She ———	- the railway station before the train came.
a) had reached	
b) has reached	
c) reached	
d) was reached	
2. His uncle does not –	here.
a) live	
b) lives	
c) living	
d) lived	
3. Peter —	editing this magazine for twenty five
years by next January.	
a) will be	
b) will have been	
c) is	
d) would be	
4. Peter —	— two wickets before rain interrupted play
a) took	
b) has taken	
c) had taken	
d) had took	
5. I —	him twice before he left for New York.

a) saw	
b) have seen	
c) had seen	
d) seen	
6. Edison —	
famous inventor.	
a) sold	
b) had sold	
c) was selling	
d) had been selling	
7. In my youth I ——	exercise every day.
a) had taken	
b) took	
c) was taking	
d) had been taking	
8. She ———	— for Delhi this evening.
a) is leaving	
b) was leaving	
c) have been leaving	
d) had left	
9. Heat —	—- bodies.
a) expanded	
b) would expand	
c) expands	
d) is expanding	
10. We —	——— living here since 1990.
a) were	
b) are	
c) have been	
d) had been	
Answer	
1. had reached	
2. live	

<ul> <li>3. will have been</li> <li>4. had taken</li> <li>5. had seen</li> <li>6. sold (= used to sell)</li> <li>7. took (= used to take)</li> <li>8. is leaving</li> <li>9. expands</li> </ul>
Q2.Fill in the blanks by using the correct tense form of the verbs given in brackets.
(a) We (go) to Guwahati by Rajdhani Express last
month.  (b) Rajdhani train
Answer:
<ul><li>(a) went</li><li>(b) is</li><li>(c) provides</li><li>(d) was</li></ul>

- (e) was
- (f) has been
- (g) had been reading
- (h) would come
- (i) will pardon
- (j) are

# **Letter Writing**

Write a letter to the editor of a national daily, expressing your opinion and views on the increased human dependence on technology. Right from a small child to an adult, or even an old man, everyone wants gadgets only-cell phone, I-pod, laptop, etc. This also has a negative effect on social relationships. Using your own ideas and the unit, 'Science', Write the letter in 100-120 words.

#### **Answer:**

230 C.O.D. Colony New Delhi 23rd May, 20 21 The Editor The Times of India New Delhi

Dear Sir/Madam

Subject: Human Dependence on Technology.

Through this letter of mine, I wish to draw the attention of everyone towards the increased dependence of humans on technology. We use internet for any type of information which we find only a click away. Everyone, whether a child or an adult, wants gadgets like cell phones, I-pod, laptop, etc. No doubt, technology is a boon to mankind and has a great future ahead. But in my opinion, we should not depend on it as excess of everything is bad. It is making everyone lazy. On the other hand, cyber-crimes are also growing. The key word for this is caution.

We must make judicious use of technology and should not totally depend on it. We must believe in natural and simple living. I hope you will publish this letter in your newspaper for better future of human beings.

Yours faithfully Sambhay Jain

Following YouTube link can be accessed for reference:-

https://youtu.be/3II3R9\_Z1HY

https://youtu.be/\_oTEW5s8Pp4

हरि विद्या भवन विषय -हिंदी कक्षा -दसवीं वर्कशीट- 3

तारीख-24.4.21

पाठ - 1 किताब - संचयन ( हरिहर काका) सामान्य निर्देश:- नीचे दिया गया कार्य अपनी साहित्य की कॉपी में करिए।



# प्रश्न 1. कथावाचक और हरिहर काका के बीच क्या संबंध है और इसके क्या कारण हैं?

उत्तर . कथावाचक जब छोटा था तब से ही हरिहर काका उसे बहुत प्यार करते थे। जब वह बड़े हो गए तो वह हरिहर काका के मित्र बन गए। गाँव में इतनी गहरी दोस्ती और किसी से नहीं हुई। हरिहर काका उनसे खुल कर बातें करते थे। यही कारण है कि कथावाचक को उनके एक-एक पल की खबर थी। शायद अपना मित्र बनाने के लिए काका ने स्वयं ही उसे प्यार से बड़ा किया और इंतजार किया।

# प्रश्न 2. हरिहर काका को महंत और अपने भाई एक ही श्रेणी के क्यों लगने लगे?

उत्तर . हरिहर काका को अपने भाइयों और महंत में कोई अतंर नहीं लगा। दोनों एक ही श्रेणी के लगे। उनके भाइयों की पित्नियों ने कुछ दिन तक तो हरिहर काका का ध्यान रखा फिर बचीकुची रोटियाँ दी, नाश्ता नहीं देते थे। बिमारी में कोई पूछने वाला भी न था। जितना भी उन्हें रखा जा रहा था, उनकी ज़मीन के लिए था। इसी तरह महत ने एक दिन तो बड़े प्यार से खातिर की फिर ज़मीन अपने ठाकुर बाड़ी के नाम करने के लिए कहने लगे। काका के मना करने पर उन्हें अनेकों यातनाएँ दी। अपहरण करवाया, मुँह में कपड़ा ठूँस कर एक कोठरी में बंद कर दिया,

जबरदस्ती अँगूठे का निशान लिया गया तथा उन्हें मारा पीटा गया। इस तरह दोनों ही केवल ज़मीन जायदाद के लिए हरिहर काका से व्यवहार रखते थे। अत: उन्हें दोनों एक ही श्रेणी के लगे।

# प्रश्न 3.ठाकुरबारी के प्रति गाँव वालों के मन में अपार श्रद्धा के जो भाव हैं उससे उनकी किस मनोवृत्ति का पता चलता है?

उत्तर . कहा जाता है गाँव के लोग भोले होते हैं। असल में गाँव के लोग अंधविश्वासी धर्मभीरू होते हैं। मंदिर जैसे स्थान को पवित्र, निश्कलंक, ज्ञान का प्रतीक मानते हैं। पुजारी, पुरोहित मंहत जैसे जितने भी धर्म के ठेकेदार हैं उनपर अगाध श्रद्धा रखते हैं। वे चाहे कितने भी पतित, स्वार्थी और नीच हों पर उनका विरोध करते वे डरते हैं। इसी कारण ठाकुर बाड़ी के प्रति गाँव वालों की अपार श्रद्धा थी। उनका हर सुख-दुख उससे जुड़ा था।

# प्रश्न 4.अनपढ़ होते हुए भी हरिहर काका दुनिया की बेहतर समझ रखते हैं? कहानी के आधार पर स्पष्ट कीजिए।

उत्तर . हरिहर काका अनपढ़ थे फिर भी उन्हें दुनियादारी की बेहद समझ थी। उनके भाई लोग उनसे ज़बरदस्ती ज़मीन अपने नाम कराने के लिए डराते थे तो उन्हें गाँव में दिखावा करके ज़मीन हथियाने वालो की याद आती है। काका ने उन्हें दुखी होते देखा है। इसलिए उन्होंने ठान लिया था चाहे मंहत उकसाए चाहे भाई दिखावा करे वह ज़मीन किसी को भी नहीं देंगे। एक बार मंहत के उकसाने पर भाइयों के प्रति धोखा नहीं करना चाहते थे परन्तु जब भाइयों ने भी धोखा दिया तो उन्हें समझ में आ गया उनके प्रति उन्हें कोई प्यार नहीं है। जो प्यार दिखाते हैं वह केवल ज़ायदाद के लिए है।

# प्रश्न 5.हरिहर काका को जबरन उठा ले जाने वाले कौन थे? उन्होंने उनके साथ कैसा बर्ताव किया?

उत्तर . मंहत ने हरिहर काका को बहुत प्रलोभन दिए जिससे वह अपनी ज़मीन जायदाद ठाकुर बाड़ी के नाम कर दे परन्तु काका इस बात के लिए तैयार नहीं थे। वे सोच रहे थे कि क्या भगवान के लिए अपने भाइयों से धोखा करूँ? यह उन्हें सही भी नहीं लग रहा था। मंहत को यह बात पता लगी तो उसने छल और बल से रात के समय अकेले दालान में सोते हुए हरिहर काका को उठवा लिया। मंहत ने अपने चेले साधुसंतो के साथ मिलकर उनके हाथ पैर बांध दिए, मुहँ में कपड़ा ठूँस दिया और जबरदस्ती अँगूठे के निशान लिए, उन्हें एक कमरे में बंद कर दिया। जब पुलिस आई तो स्वयं गुप्त दरवाज़े से भाग गए।

# प्रश्न 6.हरिहर काका के मामले में गाँव वालों की क्या राय थी और उसके क्या कारण थे?

उत्तर. कहानी के आधार पर गाँव के लोगों को बिना बताए पता चल गया कि हरिहर काका को उनके भाई नहीं पूछते। इसलिए सुख आराम का प्रलोभन देकर मंहत उन्हें अपने साथ ले गया। भाई मन्नत करके काका को वापिस ले आते हैं। इस तरह गाँव के लोग दो पक्षों में बाँट गए कुछ लोग मंहत की तरफ़ थे जो चाहते थे कि काका अपनी ज़मीन धर्म के नाम पर ठाकुर बाड़ी को दे दें तािक उन्हें सुख आराम मिले, मृत्यु के बाद मोक्ष, यश मिले। मंहत ज्ञानी है वह सब कुछ जानता है। लेकिन दूसरे पक्ष के लोग कहते कि ज़मीन परिवार वालो को दी जाए। उनका कहना था इससे उनके परिवार का पेट भरेगा। मंदिर को ज़मीन देना अन्याय होगा। इस तरह दोनों पक्ष अपने-अपने हिसाब से सोच रहे थे परन्तु हरिहर काका के बारे में कोई नहीं सोच रहा था। इन बातों का एक कारण यह भी था कि काका विधुर थे और उनके कोई संतान भी नहीं थी। पंद्रह बीघे ज़मीन के लिए इनका लालच स्वाभविक था।

# प्रश्न 7.कहानी के आधार पर स्पष्ट कीजिए कि लेखक ने यह क्यों कहा, "अज्ञान की स्थिति में ही मनुष्य मृत्यु से डरते हैं। ज्ञान होने के बाद तो आदमी आवश्यकता पड़ने पर मृत्यु को वरण करने के लिए तैयार हो जाता है।"

उत्तर . जब काका को असलियत पता चली और उन्हें समझ में आ गया कि सब लोग उनकी ज़मीन जायदाद के पीछे हैं तो उन्हें वे सभी लोग याद आ गए जिन्होंने परिवार वालो के मोह माया में आकर अपनी ज़मीन उनके नाम कर दी और मृत्यु तक तिलतिल करके मरते रहे, दाने-दाने को मोहताज़ हो गए। इसलिए उन्होंने सोचा कि इस तरह रहने से तो एक बार मरना अच्छा है। जीते जी ज़मीन किसी को भी नहीं देंगे। ये लोग मुझे एक बार में ही मार दे। अत: लेखक ने कहा कि अज्ञान की स्थिति में मनुष्य मृत्यु से डरता है परन्तु ज्ञान होने पर मृत्यु वरण को तैयार रहता है।

# प्रश्न 8.समाज में रिश्तों की क्या अहमियत है? इस विषय पर अपने विचार प्रकट कीजिए।

उत्तर . आज समाज में मानवीय मूल्य तथा पारिवारिक मूल्य धीरे-धीरे समाप्त होते जा रहे हैं। ज़्यादातर व्यक्ति अपने स्वार्थ के लिए रिश्ते निभाते हैं, अपनी आवश्यकताओं के हिसाब से मिलते हैं। अमीर रिश्तेदारों का सम्मान करते हैं, उनसे मिलने को आतुर रहते हैं जबिक गरीब रिश्तेदारों से कतराते हैं। केवल स्वार्थ सिद्धि की अहमियत रह गई है। आए दिन हम अखबारों में समाचार पढ़ते हैं कि ज़मीन जायदाद, पैसे जेवर के लिए लोग घिनौने से घिनौना कार्य कर जाते हैं (हत्या अपहरण आदि)। इसी प्रकार इस कहानी में भी पुलिस न पहुँचती तो परिवार वाले महत जी (काका की) हत्या ही कर देते। उन्हें यह अफसोस रहा कि वे काका को मार नहीं पाए।

# प्रश्न 9.यदि आपके आसपास हरिहर काका जैसी हालत में कोई हो तो आप उसकी किस प्रकार मदद करेंगे?

उत्तर . यदि हमारे आसपास हरिहर काका जैसी हालत में कोई हो तो हम उसकी पूरी तरह मदद करने की कोशिश करेंगे। उनसे मिलकर उनके दुख का कारण पता करेंगे, उन्हें अहसास दिलाएँगे कि वे अकेले नहीं हैं। सबसे पहले तो यह विश्वास कराएँगे कि सभी व्यक्ति लालची नहीं होते हैं। इस तरह मौन रह कर दूसरों को मौका न दें बल्कि उल्लास से शेष जीवन बिताएँ। रिश्तेदारों से मिलकर उनके संबंध सुधारने का प्रयत्न करेंगे।

प्रश्न 10.हरिहर काका के गाँव में यदि मीडिया की पहुँच होती तो उनकी क्या स्थिति होती? अपने शब्दों में लिखिए। उत्तर 1. यदि काका के गाँव में मीडिया पहुँच जाती तो सबकी पोल खुल जाती, महत व भाइयों का पर्दाफाश हो जाता। अपहरण और जबरन अँगूठा लगवाने के अपराध में उन्हें जेल हो जाती।

Subject: Information Technology
Class- X
Work sheet -3
Barriers to Effective Communication

Date: -24/04/2021

#### Q1. What is communication barrier?

**Ans.** A communication barrier is anything that comes in the way of receiving and understanding messages that one sends to another to convey his ideas, thoughts, or any other kind of information. These various barriers of communication block or interfere with the message that someone is trying to send.

### **Q2.** List the major barriers to communication?

**Ans.** Following are few major types of barrier to effective communication:-

- 1) <u>Language Barriers</u> Language barriers are the most common communication barriers which cause misunderstandings and misinterpretations between people. ... Not using the words that other person understands makes the communication ineffective and prevents message from being conveyed.
- 2) <u>Cultural Barriers</u> When people from different cultures who might speak different languages, have different cultural beliefs or use different gestures and symbols to communicate, their cultural differences might become barriers to workplace or organisation success.
- 3) <u>Personal Barriers</u> The Personal Barriers relate to the factors that are personal to the sender and receiver and act as a hindrance in the communication process. These factors include the life

- experiences, emotions, attitudes, behavior that hinders the ability of a person to communicate.
- 4) <u>Psychological Barriers</u> The Psychological or Emotional Barriers refers to the psychological state i.e. Opinions, attitudes, status consciousness, emotions, etc. of a person that deeply affects the ability to communicate.
- 5) <u>Gender Barriers</u> These are any misunderstanding or confusion in the intended message caused by the gender difference, which results in a communication barrier. Men and women have certain basic and individual ways to saying and doing similar things which can create issues at home and work place.
- 6) <u>Emotional Barriers</u> Emotional reactions from either or both the speaker and listener can prevent effective communication. It's difficult to put aside and not act on our emotions but it's necessary.
- 7) <u>Interpersonal Barriers</u> These are the internal and external factors which a sender or receiver or both find out of their control and this might have a negative effect on communication.
- 8) <u>Environmental Barriers</u> Time, place, space, climate and noise are the major environmental barriers.
- 9) <u>Organizational Barriers</u> The Organizational Barriers refers to the hindrances in the flow of information among the employees that might result in a commercial failure of an organization.

### Q3. Explain cultural barrier and how it affects communication?

**Ans.** Every country or state has numerous religions or customs practiced by its people so the differences in their values and beliefs are also an example of cultural barriers. Cultural diversity makes communication difficult as the mindset of people of different cultures are different, the language, signs and symbols are also different. Different cultures have different meaning of words, behaviors and gestures. Culture also gives rise to prejudices and opinions which can create differences and conflicts.

# Q4. What is Psychological Barrier to communication? Please discuss common forms in brief?

**Ans.** Psychological barriers are due to the emotional character and mental limitations of human beings. These barriers result in absent-mindedness, the fear of expressing one's ideas to others, excitement and emotional instability—all accounting for an overwhelming number of communication problems. Any psychological state can affect your ability to send and receive a message.

Some common forms of psychological barriers include:

<u>Emotions</u> – The emotions in the mind of sender or the receiver may act as a barrier in communication.

<u>Prejudice</u> – The preconceived notion or opinion held by a person for another person or a community as a barrier to communication as it is lacks information.

<u>Closed minded</u> – A close minded approach stops a person or a community to accept that anything that is new and different to them especially if it is doesn't not matches their ideas and beliefs.

<u>Status</u> – It refers to position or rank in a family, society or an organisation. Being too conscious and feeling overly proud of his or her status can act as a barrier to effective communication between two parties.

# Q5. Discuss organizational barriers to effective communication? Ans.

Organizational barriers refer to barriers in effective communication which arise in formal organizations because of factors such as authority and protocols.

Some common organizational barriers to communication are:

<u>Organizational policy</u>: If the organizational policy is not supportive to free flow of communication, it may hamper the effectiveness of communications. For example, in an organisation with highly centralized pattern, people may not be encouraged to have free communication.

<u>Rules and Regulations</u>: Rigid rules and cumbersome procedures may be a hurdle to communication. Similarly, communications through prescribed channel may result in the delays.

<u>Status</u>: Status of superior may create psychological distance between him and his subordinates. A status conscious manager also may not allow his subordinates to express their feelings freely.

<u>Complexity in organizational structure</u>: In an organisation where there are number of managerial levels, communication gets delayed and distorted as number of filtering points are more.

Organizational facilities: If facilities for smooth, clear and timely communications are not provided then messages may be hampered. Facilities like frequent meetings, suggestion box, complaint box, social and cultural gathering, transparency in operations etc., will encourage free flow of communication. Lack of these facilities may create communication problems.

Please refer to following link for references (kindly ignore the ads and promotions):-

https://www.youtube.com/watch?v=GjQe8JGc4qI

https://www.youtube.com/watch?v=NNVZxTkiX1Y

#### **WORKSHEET-03**

#### SUBJECT – MATHEMATICS

# CLASS – X

#### **CHAPTER-03**

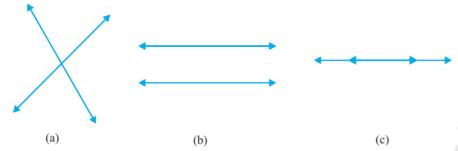
#### (PAIR OF LINEAR EQUATION IN TWO VARIABLE)

**SESSION - (2021-22)** 

#### IMPORTANT POINTS TO REMEMBER

- 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.
- The general form for a pair of linear equations in two variables x and y is a1 x + b1 y + c1 = 0 and a2 x + b2 y + c2 = 0, where a1, b1, c1, a2, b2, c2 are all real numbers.
- Given two lines in a plane, only one of the following three possibilities can happen:
  - (i) The two lines will intersect at one point.
  - (ii) The two lines will not intersect, i.e., they are parallel.
  - (iii) The two lines will be coincident.
- We show all these possibilities in
  - (a), they intersect.
- (b), they are parallel.

(c), they are coincident.



- A pair of linear equations which has no solution, is called an inconsistent pair of linear equations. A pair of
  linear equations in two variables, which has a solution, is called a consistent pair of linear equations. A pair of
  linear equations which are equivalent has infinitely many distinct common solutions. Such a pair is called a
  dependent pair of linear equations in two variables. Note that a dependent pair of linear equations is always
  consistent.
- We can now summarise the behaviour of lines representing a pair of linear equations in two variables and the existence of solutions as follows:
  - (i) the lines may intersect in a single point. In this case, the pair of equations has a unique solution (consistent pair of equations).
  - (ii) the lines may be parallel. In this case, the equations have no solution (inconsistent pair of equations).
  - (iii) the lines may be coincident. In this case, the equations have infinitely many solutions [dependent (consistent) pair of equations].
- We can observe that if the lines represented by the equation a1 x + b1 y + c1 = 0 and a2 x + b2 y + c2 = 0.
  - are (i) intersecting, then  $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ .
    - (ii) coincident, then  $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$
    - (iii) parallel, then  $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$ .

#### **Related Questions**

- Q1. Romila went to a stationery shop and purchased 2 pencils and 3 erasers for `9. Her friend Sonali saw the new variety of pencils and erasers with Romila, and she also bought 4 pencils and 6 erasers of the same kind for `18. Represent this situation algebraically and graphically. (Example 2)
- Q2. Two rails are represented by the equations x + 2y 4 = 0 and 2x + 4y 12 = 0. Represent this situation geometrically. (Example 3)
- Q3. Check graphically whether the pair of equations.

$$x + 3y = 6$$
 .....(1) and  $2x - 3y = 12$  .....(2)

is consistent. If so, solve them graphically.

Q4. Graphically, find whether the following pair of equations has no solution, unique solution or infinitely many solutions: (Example 5)

$$5x - 8y + 1 = 0 \tag{1}$$

$$3x - \frac{24}{5}y + \frac{3}{5} = 0 \tag{2}$$

- Q5. Champa went to a 'Sale' to purchase some pants and skirts. When her friends asked her how many of each she had bought, she answered, "The number of skirts is two less than twice the number of pants purchased. Also, the number of skirts is four less than four times the number of pants purchased". Help her friends to find how many pants and skirts Champa bought.
- Q6. The cost of 2 kg of apples and 1kg of grapes on a day was found to be Rs.160. After a month, the cost of 4 kg of apples and 2 kg of grapes is Rs.300. Represent the situation algebraically.
- Q7. The value of c for which the pair of equations cx y = 2 and 6x 2y = 3 will have infinitely many solutions is

$$(B) - 3$$

$$(C) -12$$

Q8. One equation of a pair of dependent linear equations is -5x + 7y - 2 = 0. The second equation can be

(A) 
$$10x + 14y + 4 = 0$$

(B) 
$$-10x - 14y + 4 = 0$$

$$(C) -10x + 14y + 4 = 0$$

(D) 
$$10x - 14y = -4$$

Note: Solve above given questions and note down important points in Math's fair notebook.

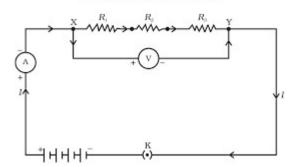
Worksheet-3 Class-X Subject-Science Session-2021-22 Ch-12: Electricity

Date: 24/04/2021

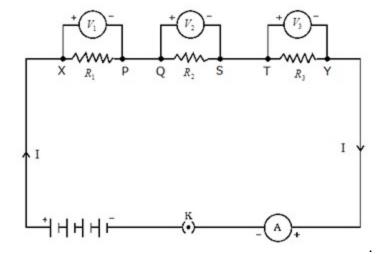
### **Resistors** in series:

• When two or more resistors are connected end to end ,the arrangement is called series combination.

#### **Resistors in Series**



- The current through the circuit remains the same.
- The potential difference becomes sum of the individual potential difference across each resistor.
- Equivalent resistance of the circuit is the sum of individual resistances



Total / overall resistance in series :  $R_s = R_1 + R_2 + R_3$ Total voltage = sum of voltage drops

$$V = V_1 + V_2 + V_3$$

 On applying Ohm's law to the three resistors separately we have, (Voltage across the each resistor)

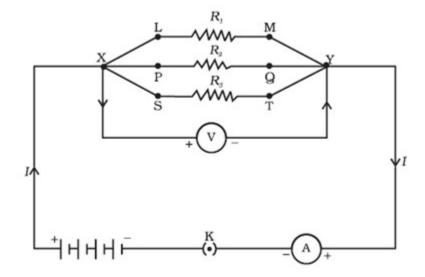
$$V_1 = IR_1;$$
  $V_2 = IR_2$  ;  $V_3 = IR_3$   
 $V = V_1 + V_2 + V_3$   
 $IR = IR_1 + IR_2 + IR_3$   
 $IR = I(R_1 + R_2 + R_3)$   
 $R_s = R_1 + R_2 + R_3$ 

#### **Disadvantages of series arrangement of resistors:**

- Two different electrical appliances, having different current requirements, cannot be connected in series as the current is constant in a series circuit.
- ➤ If one electrical appliancesget damaged or or stops working, the circuit gets broken and all other appliancesalso stop working.
- > The overall resistance of the circuit increases due to which the current from the power Supply is low.

### **Resistors in parallel**

When two or more resistors are connected in parallel:



Total current through the circuit is the sum of currents through the individual

resistance. 
$$I = I_1 + I_2 + I_3$$

- The potential difference across the two points of the circuit remains the same.
- The reciprocal of equivalent resistance of the circuit is the sum of reciprocal of the individual resistances.

Let  $\mathbf{R}_{\mathbf{p}}$  is the equivalent resistance of the parallel combination,

On applying Ohm's law to the three resistors separately we have,

$$I_1 = V / R_1;$$
  $I_2 = V / R_2$  ;  $I_{3=} V / R_3$ 

$$I = I_1 + I_2 + I_3$$

$$V / R_p = V / R_1 + V / R_2 + V / R_3$$

$$1 / R_p = 1 / R_1 + 1 / R_2 + 1 / R_3$$

#### • Advantages of parallel arrangement of resistors:

- ➤ Parallel arrangement divides current in different branches and hence each component receives the required amount of current.
- ➤ If one electrical appliances stops working ,then all other appliances Keep working normally.
- > The overall resistance of the household circuit is reduced duo to which the current from the power supply is high.

#### • Solving Problems Using The Formulae Of Resistivity:

**Example 1:** Compute the resistivity of the given material whose resistance is 2  $\Omega$ , area of cross sections & length are 25 cm<sup>2</sup> and 15 cm respectively.

**Solution:** R = 
$$2\Omega$$
; L = 15 cm = 0.15 m; A = 25 cm = 0.25 m   
R =  $\rho$ (I / A) ;  $\rho$  = RA/ I   
 $\rho$  =  $2 \times 0.25 / 0.15 = 3.333 \Omega$ 

#### • Solving Problems Using The Formulae Of Combination Of Resistors:

**Example 2:** A battery of 9 V is connected in series with resistors of  $0.2\Omega$ ,  $0.3\Omega$ ,  $0.4\Omega$ ,  $0.5~\Omega$  and  $12.0~\Omega$  respectively. How much current would flow through the  $12~\Omega$  resistor?

**Solution:** Resistors are connected in series.

So,equivalent resistance 
$$R_s = R_1 + R_2 + R_3 + R_4 + R_5$$
  
 $R_s = 0.2 + 0.3 + 0.4 + 0.5 + 12$   
 $= 13.40$ 

Potential difference, V= 9V; Current through the circuit, 
$$I = V/R$$
  
= 9/13.4  
= 0.67A

### Answer the following questions:

- Q.1. Draw a schematic diagram of a circuit consisting of a battery of three cells of 2 V each, a  $5\Omega$  resistor, an 8  $\Omega$  resistor, and a 12  $\Omega$  resistor, and a plug key, all connected in series.
- Q 2. Redraw the circuit of Questions 1, putting in an ammeter to measure the current through the resistors and a voltmeter to measure the potential difference across the  $12 \Omega$  resistor. What would be the readings in the ammeter and the voltmeter?
- Q.3 An electric lamp of  $100 \Omega$ , a toaster of resistance  $50 \Omega$ , and a water filter of resistance  $500 \Omega$  are connected in parallel to a 220 V source. What is the resistance of an electric iron connected to the same source that takes as much current as all three appliances, and what is the current through it?
- Q.4 What are the advantages of connecting electrical devices in parallel with the battery instead of connecting them in series ?
- Q.5 How can three resistors of resistances  $2\Omega$ ,  $3\Omega$ , and  $6\Omega$  be connected to give a total resistance of (i)  $4\Omega$ , (ii)  $1\Omega$ ?
- Q.6 What is (i) the highest, (ii) the lowest total resistance that can be secured by combinations of four coils of resistance  $4 \Omega$ ,  $8 \Omega$ ,  $12 \Omega$ ,  $24 \Omega$ ?
- Q.7 When a 12 V battery is connected across an unknown resistor, there is a current of 2.5 mA in the circuit. Find the value of the resistance of the resistor.
- Q.8 A battery of 9V is connected in series with resistors of 0.2  $\Omega$ , 0.3  $\Omega$ , 0.4  $\Omega$ , 0.5  $\Omega$  and 12  $\Omega$ , respectively. How much current would flow through the 12 Q resistor?
- Q.9 Show how you would connect three resistors, each of resistance 6  $\Omega$ , so that the combination has a resistance of (i) 9  $\Omega$ , (ii) 4 $\Omega$
- Q.10 Several electric bulbs designed to be used on a 220 V electric supply line, are rated 10 W. How many lamps can be connected in parallel with each other

across the two wires of 220 V line if the maximum allowable current is 5 A?

#### **NOTE:**

**❖** Above questions are given from NCERT books (blue box questions). (page no 213, 216 and 221)

For solution check the NCERT solution app & worksheet notes.

- Click over the link to get the knowledge about Resistors in series: https://www.youtube.com/watch?v=pd3RkGs1Tsg
- ➤ Click over the link to get the knowledge about Resistors in parallel: https://www.youtube.com/watch?v=nfWsMhERivM

#### SUBJECT- SOCIAL SCIENCE

CLASS - X

SESSION - 2021 - 22

#### **WORK SHEET -3**

Date- 24-04-2021

#### GEO (CH-1) RESOURCES AND DEVELOPMENT

**NOTES** (Do in your notebook)

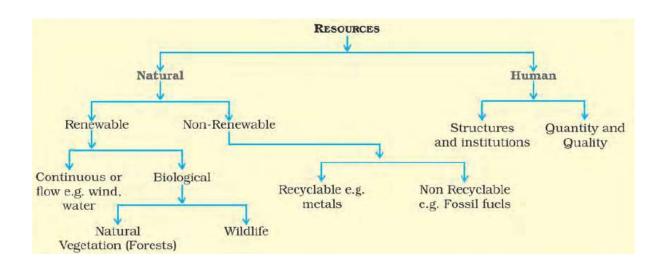
#### Resources

Everything in our environment which can be used to satisfy our needs and is technologically accessible, economically feasible and culturally acceptable is termed as 'Resource'. Human beings themselves are essential components of resources. They transform material available in the environment into resources and use them.

#### **Classification of Resources**

Resources can be classified in the following ways:

- (a) On the basis of origin biotic and abiotic
- (b) On the basis of exhaustibility renewable and non-renewable
- (c) On the basis of ownership individual, community, national and international
- (d) On the basis of the status of development potential, developed stock and reserves



#### (a) On the Basis of Origin - Biotic and Abiotic

Biotic Resources are obtained from the biosphere and have life.

Eg: Human beings, flora and fauna, fisheries, livestock etc.

Abiotic Resources: All those things which are composed of non-living things are called abiotic resources.

Eg: rocks and metals.

#### (b) On the Basis of Exhaustibility – Renewable and Non-Renewable

The resources which can be renewed or reproduced by physical, chemical or mechanical processes are known as Renewable or Replenish able Resources. The renewable resource may further be divided into continuous or flow.

Eg: Solar and wind energy, water, forests and wildlife, etc.

Non-Renewable Resources occur over a very long geological time. These resources take millions of years in their formation. Some of the resources like metals are recyclable and some like fossil fuels cannot be recycled and get exhausted with their use.

Eg: Minerals and fossil fuels.

# (c) On the Basis of Ownership – Individual, Community, National and International

<u>Individual Resources</u> are owned privately by individuals. In villages people own lands whereas in urban areas people own plots, houses and other properties.

Eg: Plantation, pasture lands, ponds, water in wells etc.

<u>Community Owned Resources</u> are accessible to all the members of the community.

Eg: Grazing grounds, burial grounds, public parks, picnic spots, playgrounds etc.

<u>National Resources</u> are owned by a nation or country. All the minerals, water resources, forests, wildlife, land within the political boundaries and oceanic area up to 12 nautical miles (22.2 km) from the coast termed as territorial water and resources therein belong to the nation.

Eg: Roads, canals, railways etc.

<u>International Resources</u> are regulated by international institutions. The oceanic resources beyond 200 nautical miles of the Exclusive Economic Zone belong to open ocean and no individual country can utilise these without the concurrence of international institutions.

# (d) On the Basis of the Status of Development – Potential, Developed Stock and Reserves

Potential Resources are the resources which are found in a region but have not been utilised.

Eg: Rajasthan and Gujarat have enormous potential for the development of wind and solar energy, but so far these have not been developed properly.

<u>Developed Resources</u>: Resources which are surveyed and their quality and quantity have been determined for utilisation. The development of resources depends on technology and level of their feasibility.

E.g Gold

<u>Stock Resource:</u> Materials in the environment which have the potential to satisfy human needs but human beings do not have the appropriate technology to access these, are called Stock.

Eg: Hydrogen can be used as a rich source of energy. But we do not have advanced technology to use it.

<u>Reserve Resource</u>: are the subset of the stock, which can be put into use with the help of existing technical 'know-how' but their use has not been started. These can be used for meeting future requirements.

Eg: Water in the dams, forests etc. is a reserve which can be used in the future.

#### Very Short Questions (Do in your notebook)

- Q1. What is a Resource?
- Q2. On the basis of its origin, resources can be classified into.
  - a) Renewable and non-renewable
  - b) Biotic and abiotic
  - c) Recyclable and non-recyclable

Q3. Resources are	accessible,	economi	cally
andacceptable.			

Note:- To understand the topic click on via link

Introduction - <a href="https://youtu.be/1yX4pWbn1lw">https://youtu.be/1yX4pWbn1lw</a>

Resources and its classification – <a href="https://youtu.be/OyTpHiPDIFg">https://youtu.be/OyTpHiPDIFg</a>

Worksheet - 2 Class-X Subject- Value Education Session- 2021-22 **Ch-2 Annie Besant** 

Date-24/04/2021

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Exercise:-
A. Fill in the blanks:-
1. Annie Woods was born in London on .
2. Annie Besant got married at 19 with the but soon got separated from her husband over differences.
3. Annie's increasingly views led to a legal separation in 1873.
4. Annie Besant met in the year 1890 and got interested in
5. Annie Besant also became involved in Indian movement.
B. Answer the following questions:-  1. Who was Annie Besant?
Ans. Annie Besant was a British socialist ,theosophist ,woman's right activist,writer ,orator and supporter of Indian Nationalism.
<ol> <li>Desribe the early life of Annie Besant.</li> <li>Ans. Annie was born in Lonon on 1 ocober .She had a unhappy childhood ,partly due to her father's deathwhen she was in five. Annie's mother persuaded her friend Ellen Marryat,.</li> </ol>
3. What happened in the life of Annie Besant after separation?

Ans. After her separation Annie began to question not only her longheld religious beliefs but the whole of conventional thinking. She began to write attacks on the churches and the way they controlled people's lives. Besant became a member of the National Secular Society.

### 4. What is Theosophy?

Ans. The term theosophy derived from the Greek theos (god) and sophia (wisdom), is generally understood to mean "divine wisdom". it means teaching about God and the world based on mystical insight.

5. When did Annie Besant die and what was her wish?

Ans. Annie Besant died on 20 september ,1933 at Adyar (Madras) . As per her wish her ashes were immersed in Ganga in Benaras.

6. What was the major work of Annie Besant?

Ans. Besant Along with Chares Bradlaugh republished a book written by birth control campaigner Charles Knowlton.

She served as the president of the Theosophical Society.

Besant served as the first woman President of the Indian National Congress in 1917. She actively worked for the cause of worker's rights and woman's rights.