

# HARI VIDYA BHAWAN

Subject: English

Class- X

Session 2021 - 22

Work sheet -4

A Triumph of Surgery

Date:-1/05/2021

**Q1.** I was really worried about Tricky this time. I had pulled up my car when I saw him in the street with his mistress and I was shocked at his appearance. He had become hugely fat, like a heated sausage with a leg at each corner. His eyes, bloodshot and rheumy, stared straight ahead and his tongue lolled from his jaws.

- (a) Who is "I" referred in the above extract ?
- (b) Why was he worried?
- (c) Which word in the above extract means the same as 'excessively'?
- (d) Why was the author shocked?

**Ans.**

- (a) "I" refers to the veterinary doctor who is the narrator of the story.
- (b) He was worried to see the appearance of Mrs. Pumphrey's dog.
- (c) 'Hugely'.
- (d) The author was shocked to see Tricky in the street.

**Q2.** What was Tricky's ailment? How did it worry Mrs. Pumphrey?

**Ans.** Mrs. Pumphrey behaved in a very silly and thoughtless manner by over pampering Tricky. Indirectly, she was responsible for his ill health. It was totally a waste of money. However, this behaviour is very common among rich people. It is a general problem of those who live alone.

**Q3.** What suggestions did Dr. Harriot give to Mrs. Pumphrey at the initial stage?

**Ans.** Dr. Harriot suggested Mrs. Pumphrey to cut down on the sweet things and not to give extra food to him. He also suggested her to give him more exercises and keep him on a very strict diet.

**Q4.** Why was Mr. Harriot tempted to keep Tricky as a permanent guest?

**Ans.** Mrs. Pumphrey used to send lots of things like eggs, wine, brandy etc., for Tricky. However, nothing was given to Tricky. All the things were consumed by the doctor and the other members of the hospital. Hence, Mr. Harriot was tempted to keep Tricky as his permanent guest.

**Q5.** Why was the narrator shocked at Tricky's appearance?

**Ans.** The narrator was shocked at Tricky's appearance because he had become very fat. His blood red and rheumy eyes gazed straight. His tongue lolled from his jaws.

**Q6.** Do you agree that Tricky was in better hands of the surgeon who offered him no food but plenty of water, than with rich mistress?

**Ans.** Yes, Tricky was in better hands as the surgeon treated him well. He gave him the diet as per his need. He avoided over-feeding as his affectionate and emotional mistress did.

**Q7.** In the end of the lesson, Mrs. Pumphrey says, "This is a triumph of surgery." Why?

**Ans.** Mrs. Pumphrey's dog, Tricky had fallen ill and had to be admitted for treatment to Rd. Harriot's hospital. Rd. Harriot gave him a lot of water and exercise, which helped Tricky to recover. When Mrs. Pumphrey went to collect him, Tricky jumped into her lap and started licking her face. Seeing him fully recovered, Mrs. Pumphrey called it a triumph in surgery.

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

<https://youtu.be/8AEW7b0JkW4>

<https://youtu.be/8AIY16cEe2g>

हरि विद्या भवन  
कक्षा-दसवीं  
विषय -हिंदी  
वर्कशीट- 4

तारीख-1.5.21

पाठ 2 मीरा के पद (काव्यांश भाग)

सामान्य निर्देश-दिया गया कार्य अपनी साहित्य की कॉपी में करिए।



प्रश्नों के उत्तर दीजिए-

**प्रश्न 1 :- पहले पद में मीरा ने हरि से अपनी पीड़ा हरने की विनती किस प्रकार की है ?**

उत्तर :- पहले पद में मीरा कहती हैं कि जिस प्रकार हे ! प्रभु आप अपने सभी भक्तों के दुखों को हरते हो ,जैसे - द्रोपदी की लाज बचाने के लिए साड़ी का कपड़ा बढ़ाते चले गए ,प्रह्लाद को बचाने के लिए नरसिंह का रूप धारण कर लिया और ऐरावत हाथी को बचाने के लिए मगरमच्छ को मार दिया उसी प्रकार मेरे भी सारे दुखों को हर लो अर्थात सभी दुखों को समाप्त कर दो।

**प्रश्न 2 :- दूसरे पद में मीराबाई श्याम की चाकरी क्यों करना चाहती है ? स्पष्ट कीजिए।**

उत्तर :- दूसरे पद में मीरा श्री कृष्ण की नौकर बनने की विनती इसलिए करती है क्योंकि वह श्री कृष्ण के दर्शन का एक भी मौका खोना नहीं चाहती है। वह कहती है कि मैं बगीचा लगाऊँगी ताकि रोज सुबह उठते ही मुझे श्री कृष्ण के दर्शन हो सकें।

**प्रश्न 3 :- मीरा ने श्री कृष्ण के रूप सौंदर्य का वर्णन कैसे किया है ?**

उत्तर :- मीरा श्री कृष्ण के रूप सौंदर्य का वर्णन करते हुए कहती हैं कि उन्होंने सर पर मोर पंख का मुकुट धारण किया हुआ है ,पीले वस्त्र पहने हुए हैं और गले में वैजंत फूलों की माला को धारण किया हुआ है। मीरा कहती हैं कि जब श्री कृष्ण वृन्दावन में गाय चराते हुए बांसुरी बजाते है तो सब का मन मोह लेते हैं।

**प्रश्न 4 :- मीरा की भाषा शैली पर प्रकाश डालिए।**

उत्तर :- मीरा को हिंदी और गुजरती दोनों की कवयित्री माना जाता है। इनकी कुल सात -आठ कृतियाँ ही उपलब्ध हैं। मीरा की भाषा सरल ,सहज और आम बोलचाल की भाषा है, इसमें राजस्थानी ,ब्रज, गुजरती,पंजाबी और खड़ी बोली का मिश्रण है।पदों में भक्तिरस है तथा अनुप्रास ,पुनरुक्ति ,रूपक आदि अलंकारों का भी प्रयोग किया गया है।

**प्रश्न 5 :- वे श्री कृष्ण को पाने के लिया क्या - क्या कार्य करने को तैयार हैं ?**

उत्तर :- मीरा श्री कृष्ण को पाने के लिए अनेक कार्य करने के लिए तैयार हैं - वे कृष्ण की सेविका बन कर रहने को तैयार हैं ,वे उनके विचरण अर्थात घूमने के लिए बाग़ बगीचे लगाने के लिए तैयार हैं ,ऊँचे ऊँचे महलों में खिड़कियां बनाना चाहती हैं ताकि श्री कृष्ण के दर्शन कर सके और यहाँ तक की आधी रात को जमुना नदी के किनारे कुसुम्बी रंग की साड़ी पहन कर दर्शन करने के लिए तैयार हैं।

**( ख ) निम्नलिखित पंक्तिओं का काव्य - सौन्दर्य स्पष्ट कीजिए :-**

**1 ) हरि आप हरो जन री भीर।**

**द्रोपदी री लाज राखी ,आप बढ़ायो चीर।**

**भगत कारण रूप नरहरि ,धरयो आप सरीर।**

काव्य -सौन्दर्य - इन पंक्तिओं में मीरा श्री कृष्ण के भक्ति -भाव को प्रकट कर रही है। इन पंक्तिओं में शांत रस प्रधान है। मीरा कहती है कि हे !श्री कृष्ण आप अपने भक्तों के कष्टों को हरने वाले हो। आपने द्रोपदी की लाज बचाई और साड़ी के कपडे को बढ़ाते चले गए। आपने अपने भक्त प्रह्लाद को बचाने के लिए नरसिंह का रूप भी धारण किया।

## 2) बूढ़तो गजराज राख्यो ,काटी कुञ्जर पीर।

दासी मीराँ लाल गिरधर , हरो म्हारी भीर।।

काव्य सौन्दर्य - इन पंक्तिओं में मीरा श्री कृष्ण से उनके दुःख दूर करने की विनती करती हैं। इन पंक्तिओं में तत्सम और तद्भव शब्दों का सुन्दर मिश्रण है। मीरा कहती हैं कि जिस तरह हे !श्री कृष्ण आपने हाथियों के राजा ऐरावत को मगरमच्छ के चंगुल से बचाया था मुझे भी हर दुःख से बचाओ।

## 3) चाकरी में दरसन पास्युँ ,सुमरन पास्युँ खरची।

भाव भगती जागीरी पास्युँ ,तिनू बातों सरसी।।

काव्य सौन्दर्य - इन पंक्तिओं में मीरा श्री कृष्ण के प्रति अपनी भाव भक्ति दर्शा रही है। यहाँ शांत रस प्रधान है। यहाँ मीरा श्री कृष्ण के पास रहने के तीन फायदे बताती है। पहला -उसे हमेशा दर्शन प्राप्त होंगे ,दूसरा -उसे श्री कृष्ण को याद करने की जरूरत नहीं होगी और तीसरा -उसकी भाव भक्ति का साम्राज्य बढ़ता ही जायेगा।

## **HARI VIDYA BHAWAN**

**Subject: Information Technology**

**Class- X**

**Session 2021 - 22**

**Work sheet -4**

**Measures to overcome barriers in effective communication**

**Date:-1/05/2021**

**Q1.** How can you overcome emotional barriers in communication?

**Ans.** Emotional barrier is very common and can be overcome and improved with practice. To overcome this barrier:-

- Make effective use of body language
- Avoid showing emotions while communicating. Do not let your mood affect your conversation.
- Do not communicate while having mood swings, anger and anxiety. Give yourself time to relax then talk or write.

**Q2.** Why constructive feedback is necessary in process of communication?

**Ans.** For effective communication, it is necessary to give a constructive feedback especially if it is a negative feedback, as it would help in building good bonding and understanding between the sender and the receiver and will help the receiver to make improvements effectively.

**Q3.** Discuss how to overcome language barriers?

**Ans.** To overcome language follow these techniques:-

- Use simple language. No jargons.
- Usage of calm and respectful tone
- Use a common language to communicate

- Use a translator, person or a machine if people do not understand each other language
- Use visual methods of communication. It is easily comprehensible.

**Q4.** Why effective listening is important for effective communication?

**Ans.** For effective communication, it is important to listen to other person with patience, attention and positive attitude. This way it would be easy for the receiver and sender to make appropriate responses and conversations without any misunderstanding or confusions.

**Q5.** Please give suggestions to manage organizational barriers.

**Ans.** We have to ensure following things to manager organizational barriers:-

- Simple structured hierarchy
- Easy access to hire management for raising issues or giving business improvement ideas
- Business process must be well defined for the employees to understand work culture and their duties and rights.

**Q6.** Recommend solutions to tackle interpersonal barriers in communication.

**Ans.**

- It would be wise to implement to following ways of handling interpersonal barriers:-
- Use simple words to communicate
- Be a good listener and then we would be able to understand and respond effectively
- Maintain composure while communicating
- Provide constructive feedback or criticism.

**Q7.** How can we effectively overcome psychological barriers in communication?

**Ans.** To overcome Psychological barriers we must follow the following solutions:-

- Have a positive attitude towards others and be open-minded.
- Be a good listener. Listen to understand not just to reply.
- Read, listen and watch about various aspects of life such as wildlife, religions, technology, sports, global climate change and politics. This way we will have more exposure to facts and thoughts around us.
- Try being in another person's situation, this we can easily understand or accept behavior and actions of other people.

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

<https://youtu.be/4bgMh72eYu8>

<https://youtu.be/R3YTFFOaZTI>

**WORKSHEET-04****SUBJECT – MATHEMATICS****CLASS – X****CHAPTER-03****(PAIR OF LINEAR EQUATION IN TWO VARIABLE)****SESSION - (2021-22)****IMPORTANT POINTS TO REMEMBER**

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

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

$$7x - 15y = 2 \quad (1)$$

$$x + 2y = 3 \quad (2)$$

**Solution** :

**Step 1** : We pick either of the equations and write one variable in terms of the other. Let us consider the Equation (2) :

$$x + 2y = 3$$

and write it as

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

**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  $x = \frac{49}{29}, y = \frac{19}{29}$ .

- **Elimination Method**: Now let us consider another method of eliminating (i.e., removing) one variable. This is sometimes more convenient than the substitution method. Let us see how this method 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 person by ₹  $9x$  and ₹  $7x$  and their expenditures by ₹  $4y$  and ₹  $3y$  respectively. Then the equations formed in the situation is given by :

$$9x - 4y = 2000 \quad (1)$$

and

$$7x - 3y = 2000 \quad (2)$$

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

$$27x - 12y = 6000 \quad (3)$$

$$28x - 12y = 8000 \quad (4)$$

**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.,  $y = 4000$

### Related Questions

Q1. The cost of 2 pencils and 3 erasers is ` 9 and the cost of 4 pencils and 6 erasers is ` 18. Find the cost of each pencil and each eraser.

Q2. Use elimination method to find all possible solutions of the following pair of linear equations :

$$2x + 3y = 8 \quad \dots\dots\dots(1)$$

$$4x + 6y = 7 \quad \dots\dots\dots(2)$$

Q3. Use elimination method to find all possible solutions of the following pair of linear equations :

$$x + 3y = 6 \quad \dots\dots(1) \quad \text{and} \quad 2x - 3y = 12 \quad \dots\dots(2)$$

Q4. The sum of a two-digit number and the number obtained by reversing the digits is 66. If the digits of the number differ by 2, find the number. How many such numbers are there?

Q5. For which values of  $p$  does the pair of equations given below has unique solution?

$$4x + py + 8 = 0$$

$$2x + 2y + 2 = 0$$

Q6. A boat goes 30 km upstream and 44 km downstream in 10 hours. In 13 hours, it can go 40 km upstream and 55 km down-stream. Determine the speed of the stream and that of the boat in still water.

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

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# HARI VIDYA BHAWAN

## Worksheet-4

### Class-X

### Subject-Science

### Session-2021-22

### Ch-12: Electricity

Date: 01/05/2021

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#### ❖ Heating Effect of electric current

When electric current flows through a metallic conductor( like a high resistance wire) the conductor becomes hot after sometime and produces heat.This is called **heating effect of electric current**.

e.g. A bulb becomes hot after some time ,when we switch on an electric iron,it becomes hot.  
This is because of heating effect of electric current.

#### • What causes heating effect of electric current?

Heating effect happens due to conversion of **electric energy** into **heat energy**.

- We know that battery or cell is a source of electric energy.
- Due to chemical reaction in this battery or cell, potential difference is generated.
- This potential difference causes electrons to flow through circuit.
- This circuit has resistors which resist flow of current.
- Work is to be done to overcome this resistance.
- While doing this work, this source of energy in conductor is dissipated ( converted) in resistor as heat energy.
- Potential difference ( V ) is a measure of work done ( W ) in moving a unit charge ( Q ) across a circuit.

$$V = W / Q$$

$$W = V Q \dots\dots\dots(i)$$

Power = Work done / time taken

$$P = W / t \dots\dots\dots(ii)$$

Substituting the value of W in equation (ii) :

$$\text{We get, } P = V \times Q / t$$

$$P = V \times I \quad [\text{Electric current : } I = Q / t \quad ]$$

We know that , Energy = power  $\times$  Time

Thus, Heat energy due to current = Electric Power  $\times$  Time

$$H = P \times t$$

$$H = VI \times t \quad [ P = VI ]$$

$$H = VI t$$

Also putting  $V = IR$  by Ohm's Law

$$H = V I t$$

$$H = ( IR ) \times I t$$

$$H = I^2 R T$$

**This is known as Joule's law of heating.** It states that heat produced in a circuit is directly proportional to the square of current flowing, resistance for current and time for which current flows.

- According to the Joule's law of heating ,the amount of heat produced in conductor is

**1)Directly proportional to square of electric current flowing through it.**

$$H \propto I^2$$

It means if we double the current ,the heat becomes 4 times. Hence, more current ,more the heat less the current ,less heat produced.

**2)Directly proportional to resistance of conductor.  $H \propto R$**

It means if we use wire made up of metal having less resistance ,it will produce less heat.

**3) Directly proportional to time for which electric current flow through conductor.  $H \propto t$**

It means if we switch on an electric gadget for more time, it will get heated up more and if We use for less time , it will get less heated.

- **Disadvantages of heating effect**
  - Loss of energy in the unwanted heat.
  - Wear and tear of components

- **Practical application of heating effect of current**

**1) Electric heater,iron,water heater work on heating effect of current.**

When these appliances are connected to supply of electricity they become hot but wires remain cold.They are made of **nichrome (high resistivity and hence high resistance)**.Heat produce is directly proportional to the resistance of material through which current flows.

Nichrome has high resistance so large amount of heat is produced and filament of appliance become hot.

Connecting wires are made up of Cu or Al with small resistance,so small heat is produced and they remain cold.

**2)Electric bulb glows when electric current flows through filament of the bulb.**

Filament of an electric bulb is made up of **tungsten with high melting point**. Filament is enclosed in a glass envelop which is filled with nitrogen andargon gas.

Since resistance of thin filament is very high,so large heat is produced as electric current which flow through filament.Due to its large amount of heat produced,filament of bulb become white hot.Hence filament of bulb emits light and heat.

**3)Electric fuse in the electric circuit melts when large current flows in the circuit**

**Electric fuse is a safety device connected in series with electric circuit.Electric fuse is a wire made up of material whose melting point is very low.(Cu or Sn alloy).**

When large electric current flow through a circuit and hence through fuse wire,large amount of heat is produced.Due to this large heat,the fuse wire melts and circuit is broken so that current stop flowing in the circuit.This saves the electric circuit from burning.

5A means maximum current that can flow through fuse wire.

❖ **Electric power**

Rate of doing work OR Rate at which electric energy is dissipated or consumed in a circuit is called **Electric Power**.

$$\text{Power} = \text{Work done} / \text{time taken} = W / t$$

- **SI unit of Power is Watt (W).**
- The power of 1 Watt is a rate of working of 1 Joule per second. Actually Watt is a small unit, therefore, a bigger unit of electric power called Kilowatt is used for commercial purposes. Also, **1 kilowatt = 1000 Watts**

$$P = W / t$$

$$P = V \times Q / t$$

$$P = V \times I$$

$$1 \text{ W} = 1 \text{ V} \times 1 \text{ A}$$

- **1 Watt power is consumed when 1 Ampere of current flows through a device at a potential difference of 1 Volt.**
- Electrical energy is the amount of work done or energy consumed in a given amount of time. So, it is measured in Joules or Wh (watt hour) or most commonly as kWh (Kilowatt hour).

$$\begin{aligned} 1 \text{ kWh} &= 1000\text{W} \times 3600 \text{ second} \\ &= 3.6 \times 10^6 \text{ joule ( J )} \end{aligned}$$

#### ❖ Power in terms of I and R

we know that

$$P=VI \quad \dots\dots\dots(i)$$

Now from Ohm's law

$$V = IR$$

Putting this equation in equation (i), we get

$$P=I \times R \times I$$

$$\text{Power, } P= I^2 \times R$$

$$\mathbf{P=I^2R}$$

#### ❖ Power in terms of V and R

We know that,  $P=VI \quad \dots\dots\dots(i)$

Now from Ohm's law

$$V = IR$$

Or we have

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

Putting this value of  $I$  in equation (i), we get

$$P = V \times V / R$$

$$P = V^2 / R$$

- **Thus the resistance of high power devices is smaller than the low power ones.** For example, the resistance of a 100 Watt bulb (220 V) is smaller than that of 60 Watt (220 V) bulb.

➤ **Solving Problems Using The Formulae Of Joule's Law And Power:**

**Example 1:** An electric iron has a rating of 750 W, 220 V. Calculate

- the current passing through it, and
- its resistance, when in use.

**Solution:** Power,  $P = 750 \text{ W}$  ; Potential difference  $V = 220 \text{ V}$

(i) So,  $I = P / V = 750 / 220 = 3.4 \text{ A}$

(ii) Now,  $V = IR$  ;  $R = V / I$   
 $= 220 / 3.4$   
 $= 64.7 \Omega$

**Example 2:** A geyser is rated 1500 W, 250 V. It is connected to 250 V

mains. Calculate (i) the current drawn,

(ii) the energy consumed in 50 hrs,

(iii) the cost of energy consumed at ₹2.20 per kWh

**Solution:** Given,  $V = 250 \text{ V}$  ;  $P = 1500 \text{ W}$  ;  $t = 50 \text{ hrs} = 50 \times 60 \times 60 \text{ sec}$

(i)  $I = P / V = 1500 / 250 = 6 \text{ A}$

(ii) Energy consumed =  $V I t$  joule  
 $= 250 \times 6 \times 50 \times 60 \times 60$   
 $= 27 \times 10^7 \text{ J}$   
 $= 27 \times 10^7 / 3.6 \times 10^6 \text{ kWh}$   
 $= 75 \text{ kWh}$

(iii) 1 kWh costs = ₹ 2.20

75 kWh costs =  $2.20 \times 75 = ₹ 165$

## **Answer the following questions:**

- Q.1 Why does the cord of an electric heater not glow while the heating element does ?
- Q.2. Compute the heat generated while transferring 96000 coulomb of charge in one hour through a potential difference of 50 V.
- Q.3 An electric iron of resistance  $20\Omega$  takes a current of 5 A. Calculate the heat developed in 30 s.
- Q.4 What determines the rate at which energy is delivered by a current ?
- Q.5 An electric motor takes 5 A from a 220 V line. Determine the power of the motor and the energy consumed in 2 h.
- Q.6 A hot plate of an electric oven connected to a 220 V line has two resistance coils A and B, each of  $24\Omega$  resistance, which may be used separately, in series, or in parallel. What are the currents in the three cases ?
- Q.7 Compare the power used in the  $2\Omega$  resistor in each of the following circuits
- (i) a 6 V battery in series with  $1\Omega$  and  $2\Omega$  resistors, and
  - (ii) a 4 V battery in parallel with  $12\Omega$  and  $2\Omega$  resistors.
- Q.8 Two lamps, one rated 100 W at 220 V, and the other 60 W at 220 V, are connected in parallel to electric mains supply. What current is drawn from the line if the supply voltage is 220 V ?
- Q.9 Which uses more energy, a 250 W TV set in 1 hr, or a 1200 W toaster in 10 minutes ?
- Q.10 An electric heater of resistance  $8\Omega$  draws 15 A from the service mains 2 hours. Calculate the rate at which heat is developed in the heater.
- Q. 11 Explain the following:
- (i) Why is tungsten used almost exclusively for filament of electric lamps ?
  - (ii) Why are the conductors of electric heating devices, such as bread-toasters and electric irons, made of an alloy rather than a pure metal ?
  - (iii) Why are copper and aluminium wires usually employed for electricity transmission?

### **NOTE:**

- ❖ **Above questions are given from NCERT books (blue box questions). (page no 218 , 220, 221 and 222 )**
- For solution check the NCERT solution app & worksheet notes.**
- **Click over the link to get the knowledge about Heating effect of electric current :**  
<https://www.youtube.com/watch?v=j7p8b4xTO7U>
- **Click over the link to get the knowledge about electricity:**  
<https://www.youtube.com/watch?v=avEx9g3--BA>

**HARI VIDYA BHAWAN**  
**SUBJECT- SOCIAL SCIENCE**  
**CLASS – X**  
**SESSION – 2021 – 22**  
**WORK SHEET -4**

**Date- 01-05-2021**

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

**NOTES (Do in your notebook)**

**Development of Resources**

- Resources have been used by human beings indiscriminately and this has led to the following major problems.
- Depletion of resources for satisfying the greed of a few individuals.
- Accumulation of resources in a few hands, which, in turn, divided the society into two segments i.e rich and poor.
- It has led to global ecological crises such as global warming, ozone layer depletion, environmental pollution and land degradation.

Resource planning is essential for the sustainable existence of all forms of life. Sustainable Economic Development means “development should take place without damaging the environment, and development in the present should not compromise with the needs of future generations.”

**Resource Planning**

In India, there are some regions which can be considered self-sufficient in terms of the availability of resources and there are some regions which have acute shortage of some vital resources.

**Resource Planning in India**

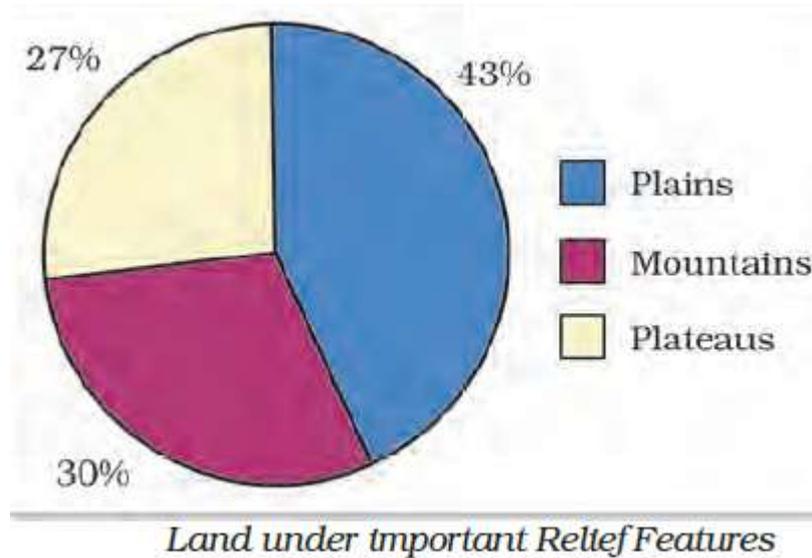
Resource planning is a complex process which involves:

- (i) Identification and inventory of resources across the regions of the country. This involves surveying, mapping and qualitative and quantitative estimation and measurement of the resources.
  - (ii) Evolving a planning structure endowed with appropriate technology, skill and institutional set up for implementing resource development plans.
  - (iii) Matching the resource development plans with overall national development plans.
- Resources can contribute to development only when they are accompanied by appropriate technological development and institutional changes. India has made concerted efforts towards achieving the goals of resource planning, right from the First Five Year Plan launched after Independence.

- To overcome irrational consumption and over-utilisation of resources, resource conservation at various levels is important.

### **Land Resources (Draw pie-chart in your notebook)**

Land is a natural resource. It supports natural vegetation, wildlife, human life, economic activities, transport and communication systems. India has land under a variety of relief features, namely; mountains, plateaus, plains and islands as shown below:



### **Land Utilisation**

Land resources are used for the following purposes:

- (1) Forests
- (2) Land not available for cultivation
  - a) Barren and wasteland
  - b) Land put to non-agricultural uses
- (3) Fallow lands
- (4) Other uncultivated lands (excluding fallow land)
- (5) Net sown area

### **Land Use Pattern in India**

The use of land is determined

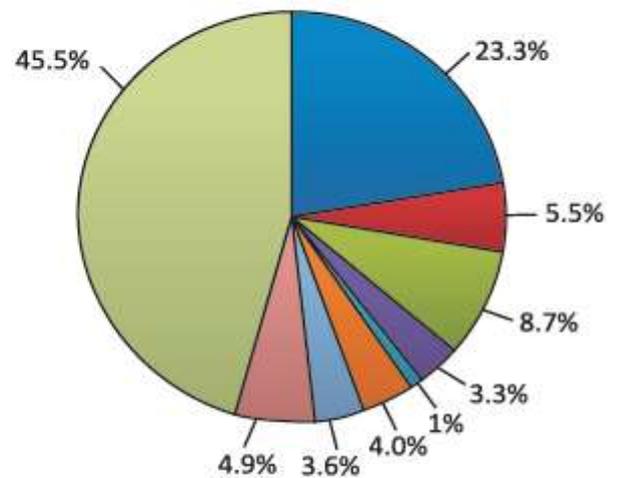
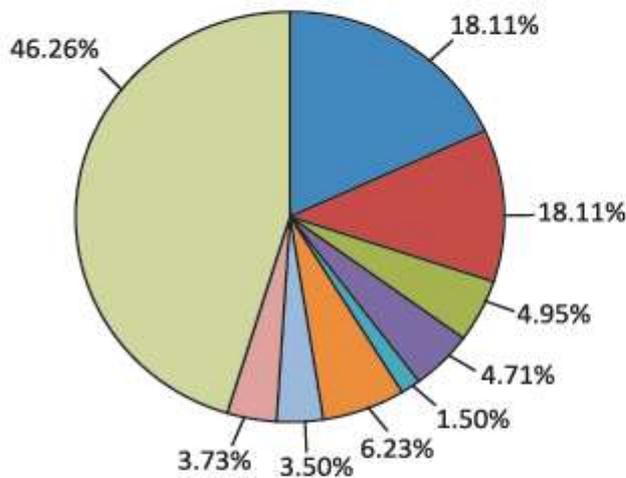
- Physical factors: such as topography, climate, soil types
- Human factors: such as population density, technological capability and culture and traditions etc.
- The data below represents the land use pattern in India.

### **DRAW PIE-CHART IN YOUR NOTEBOOK**

## General land use categories–1960–61

## General land use categories–2014–15

Reporting Area: 100 Per cent



- Forest
- Barren and unculturable waste land
- Area under non-agricultural uses
- Permanent pasture and grazing land
- Area under misc. tree crops and groves
- Culturable waste land
- Fallow other than current fallow
- Current fallow
- Net sown area

- Waste land is the land put to other non-agricultural uses which include rocky, arid and desert areas, roads, railways, industry etc. Continuous use of land over a long period of time without taking appropriate measures to conserve and manage it, has resulted in land degradation.

### Land Degradation and Conservation Measures

Human activities such as deforestation, overgrazing, mining and quarrying have contributed significantly to land degradation. Mining sites leave deep scars and traces of over-burdening the land. In recent years, industrial effluents as waste have become a major source of land and water pollution in many parts of the country.

### Some of the ways through which we can solve the problems of land degradation are:

- Afforestation and proper management of grazing.
- Planting of shelter belts of plants.
- Stabilisation of sand dunes by growing thorny bushes.
- Proper management of waste lands.
- Control of mining activities.
- Proper discharge and disposal of industrial effluents and wastes after treatment.

### Soil as a Resource

- Soil is the most important renewable natural resource. It is the medium of plant growth and supports different types of living organisms on the earth.
- It takes millions of years to form soil upto a few cms in depth. Various forces of nature such as change in temperature, actions of running water, wind and glaciers, activities of decomposers etc contribute to the formation of soil.
- Parent rock or bedrock, climate, vegetation and other forms of life and time are important factors in the formation of soil.
- Soil also consists of organic (humus) and inorganic materials.

## **Classification of Soils**

On the basis of the factors responsible for soil formation, colour, thickness, texture, age, chemical and physical properties, the soils of India are classified in different types as mentioned below.

### **Alluvial Soils**

- The entire northern plains are made of alluvial soil.
- The Alluvial Soil is deposited by 3 important Himalayan river systems – the Indus, the Ganga and the Brahmaputra.
- It is also found in Rajasthan, Gujarat and eastern coastal plains particularly in the deltas of the Mahanadi, the Godavari, the Krishna and the Kaveri rivers.
- The alluvial soil consists of various proportions of sand, silt and clay. As we move inland towards the river valleys, soil particles appear to be bigger in size whereas in the upper side of the river valley, the soils are coarse.
- Based on age, Alluvial soils can be classified as:

**Old Alluvial (Bangar):** The Bangar soil has a higher concentration of kanker nodules than the Khadar.

**New Alluvial (Khadar):** It has more fine particles and is more fertile than the Bangar.

Alluvial soils are very fertile. These soils contain an adequate proportion of potash, phosphoric acid and lime, which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops.

### **Black Soil**

- This soil is black in colour and is also known as regur soil. Climatic conditions along with the parent rock material are the important factors for the formation of black soil.
- The soil is ideal for growing cotton and is also known as black cotton soil.
- The soil covers the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh and extends in the south-east direction along the Godavari and the Krishna valleys.
- The black soils are made up of extremely fine i.e. clayey material and well-known for their capacity to hold moisture.
- Black soil is nutrients rich and contains calcium carbonate, magnesium, potash and lime.
- The soil is sticky when wet and difficult to work on unless tilled immediately after the first shower or during the pre-monsoon period.

### **Red and Yellow Soils**

- **T**his type of soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan plateau.

- These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.
- Found in parts of Odisha, Chhattisgarh, southern parts of the middle Ganga plain and along the piedmont zone of the Western Ghats.

### **Laterite Soil**

- The laterite soil develops under tropical and subtropical climate with the alternate wet and dry season.
- This type of soil is found mostly in Southern states, Western Ghats region of Maharashtra, Odisha, some parts of West Bengal and North-east regions.
- This soil is very useful for growing tea and coffee.

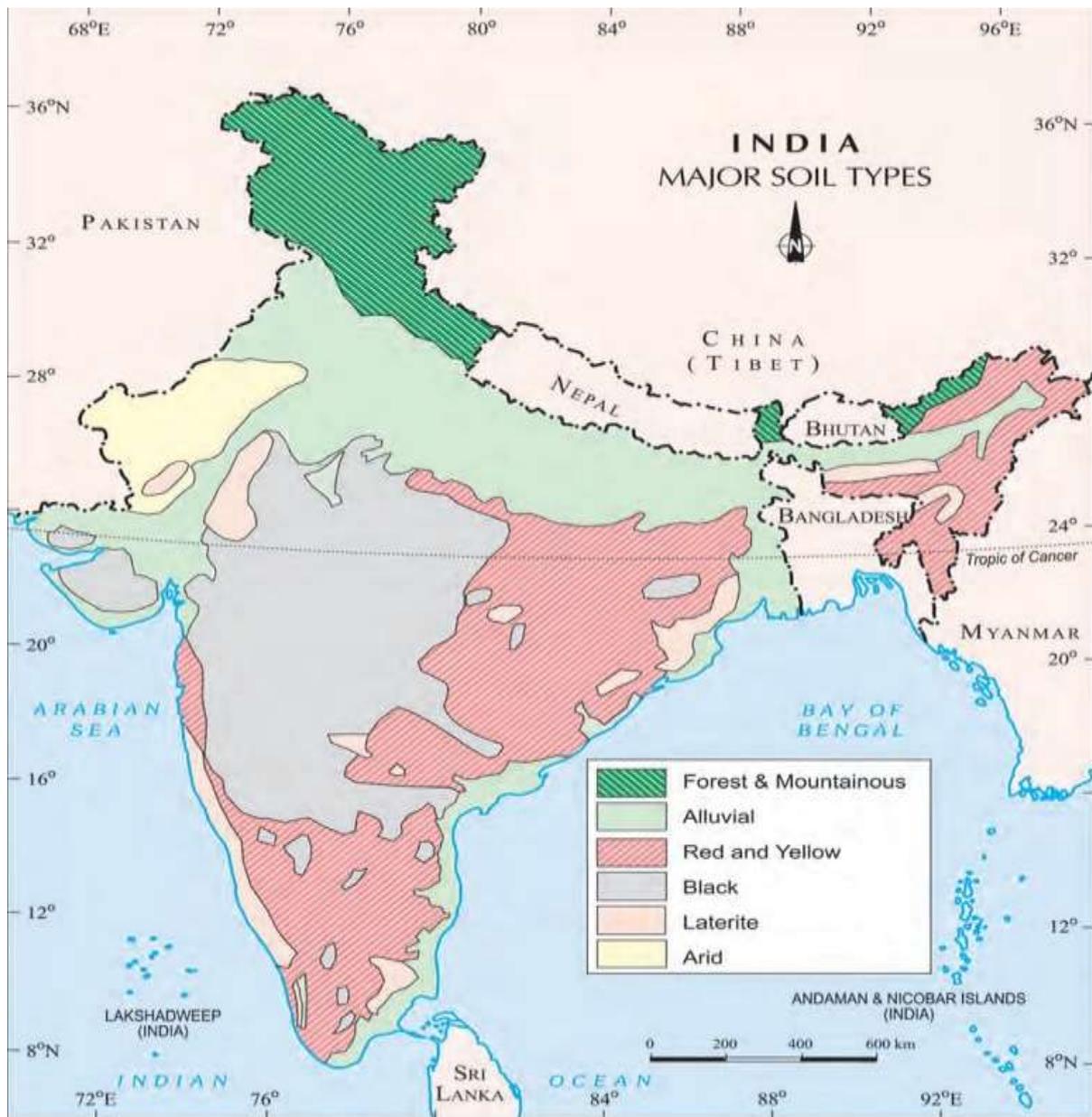
### **Arid Soils**

- Arid soils range from red to brown in colour.
- This soil is generally sandy in texture and saline in nature. In some areas, the salt content is very high and common salt is obtained by evaporating the water.
- Arid soil lacks humus and moisture.

### **Forest Soils**

- These soils are found in the hilly and mountainous areas.
- The soil texture is loamy and silty in valley sides and coarse grained in the upper slopes.
- In the snow-covered areas of Himalayas, these soils experience denudation and are acidic with low humus content. The soil is fertile on the river terraces and alluvial fans.

**The map below shows the different types of soils found in India.**



*India: Major Soil Types*

## **Soil Erosion and Soil Conservation**

- The denudation of the soil cover and subsequent washing down is described as soil erosion. The soil erosion is caused due to human activities like deforestation, over-grazing, construction and mining etc. Also, there are some natural forces like wind, glacier and water which lead to soil erosion. Soil erosion is also caused due to defective methods of farming.
- The running water cuts through the clayey soils and makes deep channels as gullies. The land becomes unfit for cultivation and is known as bad land. When water flows as a sheet over large areas down a slope and the topsoil is washed away, it is known as sheet erosion. Wind blows loose soil off flat or sloping land known as wind erosion.

## **Different Ways for Soil Conservation**

- Ploughing along the contour lines decelerate the flow of water down the slopes. This is called Contour Ploughing.
- When a large field is divided into strips and strips of grass are left to grow between the crops. Then, this breaks up the force of the wind. This method is known as Strip Cropping.
- Planting lines of trees to create shelter helps in the stabilisation of sand dunes and in stabilising the desert in western India. Rows of such trees are called Shelter Belts.

## **Short Questions**

Q1. Define the term Soil erosion. What are the different types of soil erosion?

Q2. Explain the major factors which are responsible for the formation of soil.

Q3. Describe some methods that can be adopted to prevent soil erosion.

## **Long Question**

Q1. Describe any three important characteristics of each type of soil available in India.

**Activity :-** paste / Draw political map of India and show all types of soils which is found in India.

- Arid soil
- Forest soil
- Black soil
- Red and Yellow soil
- Alluvial soil
- Laterite soil

**Click over the links to get knowledge about all topics of this chapter**

[https://youtu.be/fR1Q\\_cnd3Co](https://youtu.be/fR1Q_cnd3Co) part -1

<https://youtu.be/HQgjVOC0rek> part - 2

<https://youtu.be/hVUKFVnEiNs> part -3

<https://youtu.be/cCyVuvpaksw> part- 4

<https://youtu.be/xEATjOat5c0> part -5

**Very Short Questions** (All answers do in your notebook)

- Q1. What do you mean by sustainable economic development?
- Q2. Give two importance of resources.
- Q3. Mention some ways to solve the problem of land degradation.

**Short Questions**

- Q1. Describe the type of resources classified on the basis of exhaustibility and ownership.
- Q2. Difference between Renewable and Non-Renewable, Biotic and Abiotic Resources.

**Long Question**

- Q1. What is resource planning? Mention the steps which are involved in resource planning.

**ACTIVITY** :- Explain with a diagram (NCERT pg. no-1, fig.1.1) how nature, technology and institutions are interdependent.

**HARI VIDYA BHAWAN**  
**Worksheet – 3**  
**Class-X**  
**Subject- Value Education**  
**Session- 2021-22**  
**Ch- 3 The Marriage of a Snake Man**

**Date-01/05/2021**

**Exercise:-**

**A. Tick the correct answer :-**

1. Ultimately, the god blessed Badrinath and his wife with a  
a. child      b. money      c. curse      d. none of these
  
2. Everyone was shocked and advised Badrinath and his wife to get rid of the \_\_\_\_\_ as soon as possible.  
a. cat      b. horse      c. marmite      d. snake
  
3. \_\_\_\_\_ loved the snake as her son and didn't care that her infant was a snake.  
a. Badrinath's wife      b. Badrinath's mother  
c. Badrinath's sister      d. none of these
  
4. Badrinath was \_\_\_\_\_ to hear his wife's words to get a bride for their son.  
a. shocked      b. happy      c. sad      d. none of these
  
5. Both of the \_\_\_\_\_ were happy to see each other after a long time and spent a good time altogether.  
a. enemies      b. friends      c. neighbours      d. none of these

**B. Answer the following questions:-**

1. Why were Badrinath and his wife sad ?

Ans. Badrinath and his wife sad because they had no children.

2. Whom did Badrinath's wife give birth to ?

Ans. Every day , they prayed to god in the hope, that one day they would be blessed with a child. Ultimately ,the God blessed them with a child.

3. Why was Badrinath's wife crying?

Ans. Badrinath's wife was crying because she thought her husband is not taking any interest of their son and not even think to get him a bride.

4. During the conversation what did the friend ask Badrinath?

Ans. During the conversation the friend ask Badrinath that why he was travelling around the country.

5. Why did Badrinath rush to the daughter –in-law's room ?

Ans. One day Badrinath rush to the daughter –in-law's room after heard the voices and kept a watch and saw the snake turning into a young man. He rushed into the room and seized the snake's skin and threw it into the fire.