

## HINDI- I रचना प्रसून भाग - (5)

(याद करो)

- लेख :- 1. मेरा विद्यालय (Pg. No. 115)  
2. खेलों का महत्व (Pg. No. 112.)

- पत्र :- 1. अपने विद्यालय के लिए प्रधानाचार्य जी को अवकाश के लिए प्रार्थना पत्र लिखो। (Pg. No. 106 - 107.)  
2. दोस्त को जन्मदिन के उपलक्ष में बधाई पत्र (Pg. No. 108)

## HINDI- II भाषा भारती

पाठ - (1, 2, 3) सभी पाठों के शब्दार्थ याद करो।

पाठ - 2 चीफ की दावत (दीर्घ उत्तरीय प्रश्न) Pg. No. 21

पाठ - 3 एक पत्र: पुत्री के नाम Pg. No. 26 to 28

कविता - 1 मैंने अक्सर यह देखा है Pg. No. 10 to 12

पाठ - 2 चीफ की दावत (दीर्घ उत्तरीय प्रश्न) उत्तर write on notebook.

पाठ - 1 और 3 अभ्यास कार्य write on book and learn

लिखित और दीर्घ उत्तरीय प्रश्न। उत्तर write on notebook.

FOR OFFICE USE :-

PLEASE SCAN FOLLOWING PAGE No. 10, 11, 12

Pg. No. 26, 27, 28

Pg. No. 21 ONLY.

MRS. NARENDER PAL KAUR

DATE:- 20.03.2020.

**लेखक-परिचय-** रामावतार त्यागी जी का जन्म 17 मार्च, 1925 में उत्तर प्रदेश के मुरादाबाद जिले में कुरकावली नामक गाँव में हुआ था। मुरादाबाद के चंदौसी डिग्री कॉलेज से उन्होंने स्नातक की परीक्षा उत्तीर्ण की। इनकी लगभग पंद्रह हिंदी कविता की किताबें प्रकाशित हुई हैं तथा कुछ उपन्यास भी प्रकाशित हुए हैं। इनके लिखे एक उपन्यास का नाम है— 'समाधान'।  
12 अप्रैल, 1975 को इनका स्वर्गवास हो गया।

## कठिन शब्द

### Difficult Words

- मुसाफिर
- अक्सर
- सावधानी
- तृष्णा
- आशीष
- मुक्ति
- संकटग्रस्त
- पतवार

## शब्दार्थ Word Meaning

<b>मुसाफिर</b>	- यात्री (traveller)	<b>तृष्णा</b>	- इच्छा (desire)
<b>चरणों</b>	- पैरों (legs)	<b>याचक</b>	- माँगने वाला (beggar)
<b>अक्सर</b>	- प्रायः (often)	<b>आशीष</b>	- आशीर्वाद (blessings)
<b>थकान</b>	- थकने का भाव (tiredness)	<b>पात्र</b>	- बरतन (pot)
<b>गागर</b>	- घड़ा (pitcher)	<b>मंजिल</b>	- लक्ष्य (goal)
<b>संकटग्रस्त</b>	- मुश्किल में फँसा हुआ (distressed)	<b>आसानी से</b>	- सरलतापूर्वक (easily)
<b>निज</b>	- स्वयं की (own)	<b>अधरों</b>	- होठों (lips)
<b>नाविक</b>	- नाव चलाने वाला (sailor)		
<b>बेहोशी</b>	- होश में न होने की स्थिति (unconscious)		



## अभ्यास Exercise

### कविता को जानें (Know the Poem)

#### ◆ मौखिक विश्लेषण कीजिए (Oral analysis)

1. कवि की थकान कैसे उतर जाती है? **थके राहगीर को सहारा देने से।**
2. कविता के अनुसार पानी को पुण्य कब तक नहीं मिलता? **जब तक वह प्यासे की प्यास नहीं बुझाए।**
3. किसको अपनी पतवार थमा देने से कवि की नौका तर जाती है? **मुसीबत में फँसे नाविक को।**

◆ बहुविकल्पीय प्रश्न (MCQs)

1. कवि की थकान किसके चरणों को धोकर पीने से उतर जाती है ?

(i) माँ के

(ii) गुरु के

(iii) हारे-थके मुसाफिर के

(iv) भगवान के

2. किसका आशीष लिए बिना दानी को स्वर्ग नहीं मिलता ?

(i) याचक का

(ii) राजा का

(iii) मालिक का

(iv) गुरु का

◆ लघु उत्तरीय प्रश्न (Short answer type questions)

1. कवि की तृष्णा कब मर जाती है ?

~~जब कवि किसी की इच्छा को पूरा करने के लिए उसकी मदद करता है तब कवि की तृष्णा मर जाती है।~~

2. पानी को पुण्य कब प्राप्त होता है ?

~~किसी त्याग के त्याग बुझाने पर पानी को पुण्य मिलता है।~~

3. जब कवि किसी संकटग्रस्त नाविक को अपनी पतवार थमा देता है तो क्या होता है ?

~~जब कवि किसी संकटग्रस्त नाविक को अपनी पतवार थमा देता है तो कवि की नाव किसी न किसी माध्यम से तर जाती है।~~

◆ दीर्घ उत्तरीय प्रश्न- (Long answer type questions)

• हारे-थके मुसाफिर के चरणों को धोकर पी लेने से,

मैंने अक्सर यह देखा है, मेरी थकान उतर जाती है।' पंक्ति का भावार्थ बताइए।

~~पंक्ति का भावार्थ है कि जब किसी थके हुए यात्री अर्थात् परेशान व्यक्ति को सहाय दिया जाता है और उसकी परेशानी दूर की जाती है तो कवि की थकान अर्थात् कवि की परेशानी दूर होने का भी रास्ता मिल जाता है।~~

• कविता के अनुसार बताइए कि कब कवि की तृष्णा मर जाती है और कब उसकी गागर भर जाती है ?

~~जब कवि दूसरों की इच्छा पूरी करने के लिए उसे उसकी ज़रूरत की वस्तु दे देता है तो उसकी इच्छा मर जाती है और जब वह दूसरों के खाली बरतन को पानी से भर देता है तो उसकी भी गागर भर जाती है अर्थात् दूसरों की ज़रूरत पूरी करने से कवि की भी ज़रूरत अपने-आप~~ अब भाषा की बात (About the Language) पूरी हो जाती है।

◆ निम्नलिखित शब्दों के तीन-तीन पर्यायवाची शब्द लिखिए- (Write three synonyms of each of the following word.)

अचानक -

एकाएक

अकस्मात्

यकाथक

मंजिल -

लक्ष्य

उद्देश्य

दृश्य

तृष्णा	-	इच्छा	चाह	अभिलाषा
संकट	-	मुसीबत	परेशानी	मुश्किल
नौका	-	नाव	तरणी	पौत

- ◆ निम्नलिखित शब्दों के विलोम शब्द बॉक्स में से छाँटकर लिखिए- (Write antonyms of the following words.)

सावधानी	असावधानी	पुण्य	पाप
याचक	दाता	मुक्ति	बंधन
निज	पशया		

बंधन, पाप  
पराया, दाता  
असावधानी

- ◆ निम्नलिखित वाक्यों में क्रियाविशेषण लगाकर पुनः लिखिए- (Add adverb and write them again.)

As- यात्री गिर गया।

उदाहरण- यात्री अचानक गिर गया।

- यात्री थक गया है।  
~~यात्री थक गया है।~~  
यात्री बहुत थक गया है।
- मेरी गागर भर जाती है।  
~~मेरी गागर भर जाती है।~~  
मेरी गागर आसानी से भर जाती है।
- मंदिर में घंटे की आवाज़ गुँजती है।  
~~मंदिर में घंटे की आवाज़ गुँजती है।~~  
मंदिर में घंटे की आवाज़ जोर से गुँजती है।
- नाव तैर रही है।  
~~नाव तैर रही है।~~  
नाव धीरे-धीरे तैर रही है।



## रचनात्मक गतिविधियाँ Creative Activities

- ◆ आप अपने विद्यालय में अध्यापक की सहायता से एक 'सहायता कोष' बनाइए जिसमें छात्र/छात्राएँ स्वेच्छा से जरूरतमंद छात्रों की सहायतार्थ कुछ धनराशि दान दें। एकत्रित धनराशि से गरीब छात्रों की मदद कीजिए।

(Make a help-fund donated by the students with the help of your teacher and collect some money for the help of the poor students.)



## अभ्यास Exercise

### पाठ को जानें (Know the Lesson)

#### ◆ मौखिक विश्लेषण कीजिए- (Oral analysis)

1. पाठ में प्रस्तुत पत्र किसने, किसको, कब और कहाँ से लिखा है? *जवाहरलाल नेहरू जी ने अपनी बेटी इंदिरा को 1930 में मैनी जेल से लिखा था।*
2. पुराने ज़माने के लोगों के बारे में कैसे पता चलता है? *पुरानी इमारतों, पत्थर पर लिखी तस्वीरों और पुरानी किताबों से।*
3. पिरामिडों के बारे में आप क्या जानते हैं? *पिरामिड मिस्र के पुराने बादशाहों के मकबरे हैं, जिन्हें फ़राऊन भी कहते थे।*
4. यह कैसे पता चलता है कि पुराने ज़माने में मिस्र के रहने वाले बहुत होशियार थे? *उस समय में होने वाली तरक्की से पता चलता है -----।*

#### ◆ बहुविकल्पीय प्रश्न (MCQs)

सही उत्तर वाले विकल्प पर ✓ लगाइए- (Tick (✓) the correct answer.)

1. बड़े-बड़े पिरामिड और स्फ़िंक्स मौजूद हैं-  
(i) जापान में  (ii) मिस्र में   
(iii) फ़्रांस में  (iv) भारत में
2. औरत के सिर वाली शेर की मूर्ति को कहते हैं-  
(i) पिरामिड  (ii) ममी  (iii) स्फ़िंक्स  (iv) फ़राऊन
3. कैंडिया या क्रीट नाम का टापू स्थित है-  
(i) भूमध्य सागर में  (ii) अरब सागर में   
(iii) लाल सागर में  (iv) प्रशांत महासागर में
4. मीदास बादशाह के बारे में मशहूर है कि वह जिसे छू लेता था, वह चीज़ हो जाती थी-  
(i) चाँदी  (ii) पीतल  (iii) लोहा  (iv) सोना

#### ◆ लघु-उत्तरीय प्रश्न- (Short answer type questions)

1. प्रस्तुत पत्र किसने-किसको लिखा है?  
*प्रस्तुत पत्र जवाहर लाल नेहरू ने अपनी पुत्री इंदिरा को लिखा है।*
2. मिस्र में पुराने समय में बादशाहों को क्या कहते थे?  
*मिस्र में पुराने समय में बादशाहों को 'फ़राऊन' कहते थे।*
3. मीदास के विषय में क्या मशहूर है?  
*मीदास के विषय में यह मशहूर है कि वह जिस चीज़ को छू लेता था, वह सोना हो जाती थी।*

क्रीट के उस देवता का क्या नाम था जो आधा आदमी और आधा बैल था ?

मैनोटॉर

### दीर्घ-उत्तरीय प्रश्न- (Long answer type questions)

स्फिंक्स के बारे में आप क्या जानते हैं ? ये कहाँ पाए जाते हैं ?

स्फिंक्स, औरत के सिर वाली शेर की मूर्ति को कहते हैं। यह मिस्र में पाई जाती है। मूर्ति में औरत के चेहरे पर एक अजीब मुरझाई हुई मुसकराहट है। यह मूर्ति क्यों बनाई गई तथा इसका क्या मतलब है ? यह कोई नहीं जानता।

ममी किसे कहते हैं ? इन्हें कहाँ व किस तरह रखा जाता था ?

ममी किसी आदमी या जानवर के मरे हुए शरीर को कहते हैं, जिसमें कुछ ऐसे तेल व मसाले लगा दिए गए हों जिसे कि वह सड़ न सके।

ममी को बड़े-बड़े पिरामिडों में रखा जाता था तथा उनके पास सोने और चाँदी के गहने, स्वर्ण की चीजें और खाना रख दिया जाता था। लोगों का मानना था कि शायद मरने के बाद उन लोगों

मैनोटॉर के विषय में नेहरू जी ने अपने पत्र में क्या लिखा है ? को उन चीजों की जरूरत होगी।

मैनोटॉर के विषय में नेहरू जी ने अपने पत्र में लिखा है कि क्रीट में मैनोटॉर नाम का एक देव था जो आधा आदमी और आधा बैल था। कहा जाता है कि जवान लड़के और लड़कियाँ उसे खाने में दिए जाते थे।

### अब भाषा की बात (About the Language)

#### निर्देश के अनुसार वाक्य परिवर्तित कीजिए- (Change the sentences as directed.)

वह मिस्र के बादशाह का मकबरा है।

(बहुवचन)

वे मिस्र के बादशाहों के मकबरे हैं।

मीदास जिस चीज़ को छू लेता था वह सोना बन जाती थी।

(प्रश्नवाचक)

क्या मीदास जिस चीज़ को छू लेता था, वह क्या बन जाती थी ?

उस छोटे-से टापू में एक अच्छी सभ्यता पाई जाती थी।

(निषेधात्मक)

उस छोटे से टापू में एक अच्छी सभ्यता नहीं पाई जाती थी।

#### नीचे लिखे वाक्यों में 'कि' व 'की' के प्रयोग को ध्यान से देखिए- (Look carefully the use of 'कि' and 'की' in following sentences.)

(i) किसी को नहीं मालूम कि यह मूर्ति क्यों बनाई गई।

(ii) स्फिंक्स, औरत के सिर वाली शेर की मूर्ति को कहते हैं।

दो वाक्यों को जोड़ने के लिए 'कि' (योजक) का प्रयोग किया जाता है और दो चीज़ों का संबंध बताने के लिए 'की' (संबंधकारक विभक्ति) का प्रयोग किया जाता है।

(To join two sentences, 'कि' (conjunction) is used and to show the relation between two things, (genitive case) 'की' is used.)

- ◆ 'कि' और 'की' का प्रयोग करते हुए दो-दो वाक्यों की रचना कीजिए।

(Make two sentences using 'कि' and 'की'.)

1. कल मेरे भाई की शादी है। (2.) हम अभी घर से निकले ही थे कि बारिश आ गई।
1. यह पुस्तक मेरे बेटे की है।
2. पिता जी ने कहा कि अपना काम पूरा करो।

- ◆ निम्नलिखित शब्दों को वाक्यों में प्रयोग कीजिए- (Use these words in sentences.)

- नक्काशी :- इमारतों पर नक्काशी का काम बहुत सुंदर है।  
 अजायबघर :- लंदन के अजायबघर में मिस्त्र की ममी रखी है।  
 मशहूर :- आगरा का पेठा सभी जगह मशहूर है।  
 लिखावट :- मेरी हिंदी की लिखावट बहुत सुंदर है।  
 बलिदान :- कई जगहों पर पशुओं का बलिदान किया जाता है।

- ◆ बहुविकल्पीय प्रश्न- (MCQs)

शुद्ध वर्तनी वाले शब्दों पर ✓ लगाइए- (Tick (✓) the correct.)

- |    |              |                                     |              |                                     |                |                                     |
|----|--------------|-------------------------------------|--------------|-------------------------------------|----------------|-------------------------------------|
| 1. | (i) मौजूद    | <input type="checkbox"/>            | (ii) मौजूद   | <input checked="" type="checkbox"/> | (iii) मौजूद    | <input type="checkbox"/>            |
| 2. | (i) खंडहर    | <input checked="" type="checkbox"/> | (ii) खँडहर   | <input type="checkbox"/>            | (iii) खडंहर    | <input type="checkbox"/>            |
| 3. | (i) इस्फिंगस | <input type="checkbox"/>            | (ii) स्फिक्स | <input checked="" type="checkbox"/> | (iii) सिफिंग्स | <input type="checkbox"/>            |
| 4. | (i) मशहूर    | <input checked="" type="checkbox"/> | (ii) मशहुर   | <input type="checkbox"/>            | (iii) मशूर     | <input type="checkbox"/>            |
| 5. | (i) बादशाह   | <input type="checkbox"/>            | (ii) बादशहा  | <input type="checkbox"/>            | (iii) बादशाह   | <input checked="" type="checkbox"/> |



## रचनात्मक गतिविधियाँ Creative Activities

- ◆ अपने मित्र को पत्र लिखकर किसी ऐतिहासिक स्थल या अजायबघर के बारे में बताइए। (Write a letter to your friend describing a historical place or a museum.)
- ◆ विश्व की अन्य प्राचीन सभ्यताओं की जानकारी प्राप्त करने के लिए पुस्तकालय से 'विश्व का प्राचीन इतिहास' विषय पर पुस्तकें लेकर पढ़िए। (Try to know the other ancient civilizations of the world. Take the books on 'ancient history of the world' from the library and read.)
- ◆ निम्नांकित चित्रों को पहचानिए और इनसे जुड़ी मान्यताओं अथवा किवंदतियों बारे में जानकारी एकत्र कीजिए।

(Identify these pictures and collect the information of the related assumption.)



◆ दीर्घ उत्तरीय प्रश्न- (Long answer type questions.)

1. चीफ़ के स्वागत में मिस्टर शामनाथ व उनकी पत्नी ने क्या-क्या तैयारियाँ कीं ?  
उ०. चीफ़ के स्वागत में मिस्टर शामनाथ व उनकी पत्नी ने घर की साज-सजावट शुरू कर दी। घर के पुराने सामान को अलमारियों के पीछे और पलंगों के नीचे छिपा दिया गया और बैठक को कुर्सियों, मेज़, नेपकिन और फूलदान द्वारा सजाया गया।
2. चीफ़ के आने पर मिस्टर शामनाथ ने अपनी माँ को क्या-क्या करने की हिदायत दी ?  
उ०. चीफ़ के आने पर मिस्टर शामनाथ ने अपनी माँ को हिदायतें दी कि इस तरह मेहमानों के सामने चुपचाप मत बैठे रहना, कोई कुछ पूछे तो सही जवाब देना, पैरों में खड़ाँकें मत पहनना और मेहमानों के सामने कुर्सी पर अच्छे से बैठना।
3. माँ ने चीफ़ के लिए फुलकारी बनाना क्यों स्वीकार कर लिया ?  
उ०. माँ ने चीफ़ के लिए फुलकारी बनाना इसलिए स्वीकार कर लिया क्योंकि चीफ़ को फुलकारी बनाकर देने से उसके बैठे को तरक्की मिलनी थी।

अब भाषा की बात (About the Language)

- ◆ कर्म के आधार पर क्रिया के दो भेद होते हैं- (i) अकर्मक क्रिया (ii) सकर्मक क्रिया  
क्रिया के साथ 'क्या' अथवा 'किससे' प्रश्न करने पर जो उत्तर मिलता है, उसे कर्म कहते हैं। जो क्रियापद वाक्य में कर्म के न होने पर भी पूरा अर्थ प्रकट करते हैं, (जिन्हें कर्म की अपेक्षा नहीं होती) अकर्मक क्रियापद कहलाते हैं। (The verb is of two types on the basis of object. The first is intransitive and the other is transitive. We make question by adding what and whom to the verb. The answer will be object. Verb without object is called intransitive verb.)  
for example-

जैसे- i वे सो रहे हैं। -वे क्या सो रहे हैं? कोई उत्तर नहीं-अकर्मक क्रिया

ii बुढ़िया रो रही है। -बुढ़िया क्या या किससे रो रही है? कोई उत्तर नहीं-अकर्मक क्रिया

जिन क्रियापदों का पूरा अर्थ वाक्य में आए कर्म से स्पष्ट होता है, (जिन्हें कर्म की अपेक्षा होती है) सकर्मक क्रियापद कहलाते हैं।

(The verb that takes an object to complete its meaning is called transitive verb.)

जैसे-

(i) बच्चे सेब खा रहे हैं। -बच्चे क्या खा रहे हैं? सेब -सकर्मक क्रिया

(ii) राकेश गेंद से खेल रहा है। -राकेश किससे खेल रहा है? गेंद से -सकर्मक क्रिया



### Govinda's Disciple - Summary

The poem 'Govinda's Disciple' is written by Rabindranath Tagore. It is a beautiful poem that highlights the traits of a true master who has overcome his materialistic nature.

The great teacher sat on a rock on the bank of the Ganga. His wealthy disciple Raghunath came to him with a gift of a pair of golden bangles. After bowing, he offered the costly gift.

The master took one of the bangles and started twirling it around his one finger which suddenly slipped and fell into the water. Raghunath jumped into the water to get it back. The master teacher kept sitting peacefully on the rock. The bangle was lost in the water.

After a long search, Raghunath could not find the bangle and came back to his master. He asked the exact place where the bangle had fallen. The master took another bangle and threw it at the exact place in the water where the former bangle had fallen.

Thus, the poet gives the message that true master does not give value to materialistic things.

## Comprehension.

A. 1. a                      2. C                      3. C.

B. 1. Govinda sat on a rock by the banks of the river Ganga. Around the place were hills covered by thick forests.

2. When Govinda threw the bangle into the river, Raghunath jumped after it into the river. This shows that Raghunath was money minded person.

C. By throwing the golden bangle into the river, Govinda tried to teach his disciple that wealth should not be important to a person who aimed to get spiritual knowledge.

D. i) frowned the jutting bank:

It means that the bank had extended edge with frowning look.

ii) the water held and hid what it stole and ran its way

It means that the golden bangle went deep into the river ~~and~~ never to be found again

### Ch- 3.

### Bravo Manju!

#### Comprehension

- A. 1. True      2. True      3. False      4. False.  
5. False.      6. True.

B. 1. a. Mrs. Parelkar said these words to Manjula.

b. Manjula needed colours and paints. Yes, she bought whatever she needed.

c. The next day Manjula painted her first painting.

2. a) Mrs Parelkar said these words to Mr. Parelkar.

b). The words that Mr. Parelkar used, were filled with discouragement. So, Mrs. Parelkar was very upset.

c). After hearing the conversation, Manjula decided to give up her decision to do painting.

3. a) Amol said these words to Manjula.

b). Amol referred to the prize of the 'On-the-Spot Painting Competition in his school.

c). The ability of Manjula prompted Amol to say these words.

C. Answer these questions :-

1. Manjula had just two fingers on each hand.

2. She got a set of artist's water colours, a painting

book and three water colour brushes.

3. Manjula overheard her father saying that she could not be an artist because of her hands. So, she decided to give up painting.

4. Her mother reminded her of her potential and encouraged her to fight. Her brother placed a newspaper cutting on her table that was about Richard Belanger who played football with an artificial feet to inspire her.

5. Amol, Manjula's brother placed the newspaper cutting on her table to encourage her.

6. Richard Belanger had artificial feet yet he played football. His story was somehow similar to Manjula. So, she got inspiration from his story and continue to learn painting.

Q: Think and Answer.

1. No, Manjula's handicap did not affect her daily life as she could paint, help in the kitchen, go to market like any other person.

2. Manjula's family was not well off as she hesitated to ask her mother for painting material and her father too was not willing to spend money on expensive watercolours.

CLASS - 7<sup>th</sup>  
SUBJECT - ENGLISH LANGUAGE

- I. Revise L- 8, 14
- II. Learn and write HOMOPHONES: 1-30  
[PAGE 241 TO 243]
- III. DO PRACTICE OF INFORMAL LETTERS,  
ARGUMENTATIVE ESSAYS AND COMPREHENSION.

CLASS VII

SUB PUNJABI

ਪਾਠ-3

ਮਲਿਕ ਭਾਗੋ ਨੂੰ ਸੁਆਰਨਾ

ਪ੍ਰਸ਼ਨ-1 ਉੱਤਰ

ਪ੍ਰਸ਼ਨ-1 ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਨੇ ਲੋਕਾਂ ਨੂੰ ਵਾਹਯਾ ਉਪਦੇਸ਼ ਦਿੱਤਾ।

ਉੱਤਰ- ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਨੇ ਲੋਕਾਂ ਨੂੰ ਵਿਰਤ ਕਰਨ, ਨਾਮ ਜਪਣ ਅਤੇ ਵੈਰ ਛੱਡਣ ਦਾ ਉਪਦੇਸ਼ ਦਿੱਤਾ।

ਪ੍ਰਸ਼ਨ-2 ਮੈਦਯੁਰ ਵਿੱਚ ਬਾਬਾ ਜੀ ਕਿਸ ਕੰਮ ਨੂੰ ਠਹਿਰਦੇ ਸਨ?

ਉੱਤਰ ਮੈਦਯੁਰ ਵਿੱਚ ਬਾਬਾ ਜੀ ਭਾਈ ਲਾਠੇ ਕੰਮ ਠਹਿਰਦੇ ਸਨ।

ਪ੍ਰ-3 ਮਲਿਕ ਭਾਗੋ ਨੇ ਆਪਣੇ ਘਰ ਵਿੱਚ ਕਿਹਾ ਨੂੰ

ਬੁਝਾਇਆ ਸੀ।

ਉੱਤਰ- ਮਲਿਕ ਭਾਗੋ ਨੇ ਆਪਣੇ ਘਰ ਵਿੱਚ ਖੰਡਾਂ ਨੂੰ ਬੁਝਾਇਆ ਸੀ।

ਪ੍ਰਸ਼ਨ-4 ਗੁਰੂ ਜੀ ਨੇ ਮਲਿਕ ਭਾਗੋ ਨੂੰ ਕੀ ਕੰਮ ਕਰਨ ਦਾ ਠੀਕਿਆ?

ਉੱਤਰ- ਗੁਰੂ ਜੀ ਨੇ ਮਲਿਕ ਭਾਗੋ ਨੂੰ ਇਹ ਕੰਮ ਕਰਨ ਦਾ ਠੀਕਿਆ ਕਿ ਉਹਨਾਂ ਨੂੰ ਉਸ ਦੇ ਬਾਹੁ ਵਿੱਚੋਂ ਗਰੀਬਾਂ ਦੇ ਬੂਟ ਦੀ ਬੇਸ ਆਉਂਦੀ ਹੈ।

ਪ੍ਰਸ਼ਨ-5 ਮਲਿਕ ਭਾਗੋ ਕੀ ਵੇਖ ਕੇ ਹੈਰਾਨ ਰਹਿ ਗਿਆ?

ਉੱਤਰ ਮਲਿਕ ਭਾਗੋ ਆਪਣੇ ਦੁਆਰਾ ਗੁਰੂ ਜੀ ਨੂੰ ਦਿੱਤੇ ਭੋਜਨ ਵਿੱਚੋਂ ਬੂਟ ਦੀਆਂ ਧਾਗਾਂ ਵੇਖ ਕੇ ਹੈਰਾਨ ਹੋ ਗਿਆ।

2. ਪ੍ਰਸ਼ਨ | ਉੱਤਰ

ਪ੍ਰਸ਼ਨ-1 ਗੁਰੂ ਜੀ ਨੇ ਲੋਕਾਂ ਨੂੰ ਉਪਦੇਸ਼ ਦਿੰਦਿਆਂ ਕੀ ਵਿਗਾੜ

ਉੱਤਰ ਗੁਰੂ ਜੀ ਨੇ ਲੋਕਾਂ ਨੂੰ ਸੱਚ ਨਾਮ ਜਪਣ, ਵਿਰਤ ਕਰਨ, ਨਾਮ ਜਪਣ ਅਤੇ ਵੈਰ ਛੱਡਣ ਦਾ ਉਪਦੇਸ਼ ਦਿੱਤਾ। ਇਸ

ਨਾਲ ਖੁਸ਼ਮਾ ਖੁਸ਼ ਹੋਵੇ।

ਸ਼ੁਕਨ-2 ਮਲਿਕ ਭਾਗੇ ਵੀ ਕਰ ਰਿਹਾ ਸੀ ਤੇ ਉਸ ਵਿੱਚ ਉਸ ਨੇ ਕਿਹਾ ਤੂੰ ਬੁਕਾਇਆ ਸੀ।

ਉੱਤਰ ਮਲਿਕ ਭਾਗੇ ਆਪਣੇ ਖਿੱਤਾਂ ਦਾ ਸ਼ਰਯ ਕਰ ਰਿਹਾ ਸੀ। ਇਸ ਵਿੱਚ ਉਸ ਨੇ ਕਈ ਥਾਵੇਂ ਬਣਾਏ ਅਤੇ ਕਈ ਥਾਵੇਂ ਬ੍ਰਾਹਮਣਾਂ ਤੂੰ ਬੁਕਾਇਆ ਸੀ।

ਸ਼ੁਕਨ-3 ਕੌਰਾਂ ਕੌਰੇ ਘਾਬਾ ਸੀ ਏ ਕੇ ਸ਼ਬਦ ਸੁਣ ਕੇ ਮਲਿਕ ਭਾਗੇ ਵੀ ਬੋਲਿਆ।

ਉੱਤਰ ਕੌਰਾਂ ਕੌਰੇ ਘਾਬਾ ਸੀ ਏ ਕੇ ਬੋਲ ਸੁਣ ਕੇ ਮਲਿਕ ਭਾਗੇ ਕਹਿਣ ਲੱਗਾ ਕਿ ਤੁਸੀਂ ਕਿਹਾ ਜਾਵੇ। ਕੇ ਘਾਬਾ ਸੀ ਆਉਣ ਲਈ ਨਾਂ- ਕੁਰ ਕਰਨ ਤਾਂ ਉਨ੍ਹਾਂ ਤੂੰ ਚੁੱਕ ਕੇ ਲੈ ਆਵੇ। ਇਸ ਵਿੱਚ ਸੋਚੀ ਬੋਲੀ ਤੀ। ਮੈਂ ਉਸ ਕਰੀਬ ਤੂੰ ਆਪਣੇ ਘਰ ਵਿੱਚ ਵੱਸਣਾ ਚਾਹੁੰਦਾ ਹਾਂ।

ਸ਼ੁਕਨ-4 ਘਾਬਾ ਸੀ ਨੇ ਮਲਿਕ ਭਾਗੇ ਤੂੰ ਕਿਵੇਂ ਸੁਧਾਰਿਆ।

ਉੱਤਰ ਘਾਬਾ ਸੀ ਨੇ ਇੱਕ ਗੱਲ ਵਿੱਚ ਭਾਈ ਲਾਲੇ ਦੀ ਕੋਠੇ ਦੀ ਕੋਈ ਅਤੇ ਕੁਝ ਗੱਲ ਵਿੱਚ ਮਲਿਕ ਭਾਗੇ ਦੇ ਪਰਦਾਨ ਕਰ ਕਏ। ਉਨ੍ਹਾਂ ਨੂੰ ਜੋਰ ਨਾਲ ਬੁਕਾਇਆ ਸਿੱਧੇ ਭਾਈ ਲਾਲੇ ਦੀ ਕੋਈ ਵਿੱਚੋਂ ਕੁੱਝ ਨਿਕਲ ਰਿਹਾ ਸੀ ਉੱਥੇ ਮਲਿਕ ਭਾਗੇ ਦੀ ਕੋਈ ਵਿੱਚੋਂ ਬੂਟੇ ਦੀਆਂ ਧਾਗਾਂ ਨਿਕਲੀਆਂ। ਇਹ ਵੇਖ ਕੇ ਮਲਿਕ ਭਾਗੇ ਨੇ ਆਪਣੀ ਗਲਤੀ ਸੋਚੀ ਕਰ ਕਰ ਲਈ।

3 ਟੁਕੜੇ ਵਿੱਚ ਵਰਤੇ

1,2 ਉਦਾਸੀਆਂ, ਕਲਿਆਣ ਕਰਨਾ - ਸ਼੍ਰੀ ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਨੇ ਕੌਰਾਂ ਦੇ ਕਲਿਆਣ ਲਈ ਤਾਰ ਉਦਾਸੀਆਂ ਕੀਤੀਆਂ।

3 ਸਕਤਾ - ਗੁਰੂ ਜੀ ਨੇ ਭੁੱਕੀ ਭਟਕੀ ਜਨਤਾ ਤੂੰ ਸਿੱਧੇ ਰਾਹ ਆਇਆ।

4. ਕੋਕੋਈ - ਕੋਕੋਈ ਦੀ ਸਦਰ ਕੋਰੋ।

5. ਪੁਰਖਤ - ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਦੀ ਇੱਕ ਸਾਖੀ ਬਹੁਤ ਪੁਰਖਤ ਹੈ।

6. ਵਚਨ - ਮੈਂ ਆਪਣਾ ਵਚਨ ਪੂਰਾ ਕੀਤਾ।

7. ਹੇਠੀ - ਕਿਸੇ ਦੀ ਹੇਠੀ ਕਰਨਾ ਗਲਤ ਹੈ।

8. ਪਰਦਾਨ - ਮੈਂ ਤੂੰ ਦੱਸ - ਦੱਸ ਤੁਹਾਡੇ ਪਰਦਾਨ ਬਹੁਤ ਧਰਮਦ ਹਨ।

9. ਆਨਾ - ਕਾਨੀ ਕਰਨਾ - ਪੜ੍ਹਨ ਕਈ ਆਨਾ - ਕਾਨੀ ਕਰਨਾ ਗਲਤ ਹੈ।

10. ਆਂਗ ਬਥੂਨਾ ਹੋਣਾ - ਸਫ਼ਿਰ ਭਾਗੇ ਆਪਣੀ ਹੋਣੀ ਕੋਈ ਵੇਖ ਕੇ ਆਂਗ ਬਥੂਨਾ ਹੋ ਗਿਆ।

ਪੁ. ਖਾਨੀ ਖਾਣਾਂ ਹੋਏ :-

1. ਕੁੱਠੀ ਕੁਟਰੀ
2. ਮਿਹਨਤ
3. ਪਿਤਰਾਂ
4. ਕਿਰਤ
5. ਖਾਣੇ
6. ਕਰਮ/ਖੂਨ।



ਪਾਠ-2

ਪ੍ਰਾਰਥਨਾ ਸਭਾ

ਸ਼੍ਰੋਮਣੀ ਉੱਤਰ

ਸ਼੍ਰੋਮਣੀ-1 ਰਵੀਤ ਨੇ ਆਪਣੇ ਡੈਡੀ ਨੂੰ ਸਕੂਲੋਂ ਆਉਂਦਿਆਂ ਹੀ ਵੀ  
ਵਿਗਾੜ

ਉੱਤਰ- ਰਵੀਤ ਨੇ ਸਕੂਲੋਂ ਆਉਂਦਿਆਂ ਆਪਣੇ ਡੈਡੀ ਨੂੰ ਵਿਗਾ  
ਅੱਜ ਸ਼ਹੀਦ ਭਗਤ ਸਿੰਘ ਦਾ ਸ਼ਹੀਦੀ ਦਿਹਾੜਾ ਹੈ ਤੇ  
ਸਕੂਲ ਦੇ ਪ੍ਰਿੰਸੀਪਲ ਨੇ ਭਗਤ ਸਿੰਘ ਦੀ ਜੀਵਨੀ ਪੁੱਠੇ  
ਵਿਸ਼ਵਾਸ ਨਾਲ ਸੁਣਾਈ।

ਸ਼੍ਰੋਮਣੀ-2 ਉਸ ਦਿਨ ਸ਼ਹੀਦੇ ਆਜ਼ਮ ਭਗਤ ਸਿੰਘ ਦਾ ਵਿਗਾੜ  
ਦਿਨ ਸੀ?

ਉੱਤਰ- ਉਸ ਦਿਨ ਸ਼ਹੀਦੇ ਆਜ਼ਮ ਭਗਤ ਸਿੰਘ ਦਾ ਸ਼ਹੀਦੀ  
ਦਿਹਾੜਾ ਸੀ।

ਸ਼੍ਰੋਮਣੀ-3 ਵਿਗਾੜ- ਵਿਗਾੜ ਦੇਸ਼- ਭਗਤਾਂ ਨੂੰ ਫਾਂਸੀ ਦਿੱਤੀ ਗਈ ਸੀ?  
ਉੱਤਰ- ਭਗਤ ਸਿੰਘ, ਸੁਖਦੇਵ ਅਤੇ ਗਜਗੁਰੂ ਵਰਗੇ ਦੇਸ਼  
ਭਗਤਾਂ ਨੂੰ ਫਾਂਸੀ ਦਿੱਤੀ ਗਈ।

ਸ਼੍ਰੋਮਣੀ-4 ਅਧਿਆਪਕ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਕਮਾਂਗੇ ਵੀ ਬਣ ਕੇ  
ਚੁੱਲ੍ਹੇ ਧਰੇ।

ਉੱਤਰ- ਅਧਿਆਪਕ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਕਮਾਂਗੇ ਡੁੱਕੀ ਜਰਨੈਲ ਬਣ  
ਕੇ ਚੁੱਲ੍ਹੇ ਧਰੇ।

ਸ਼੍ਰੋਮਣੀ-5 ਡੈਡੀ ਨੇ ਰਵੀਤ ਨੂੰ ਗਲਵੈਂਡੀ ਵਿੱਚ ਚੈਂ ਕੇ ਵੀ  
ਵਿਗਾੜ

ਉੱਤਰ- ਡੈਡੀ ਨੇ ਰਵੀਤ ਨੂੰ ਗਲਵੈਂਡੀ ਵਿੱਚ ਚੈਂ ਕੇ ਵਿਗਾੜ  
ਉਸਨੇ ਅੱਜ ਸੱਚਮੁੱਚ ਹੀ 'ਰਵੀਤ ਪੁੱਠੇ' ਬਣ ਕੇ  
ਚਿੱਠਾ ਦਿੱਤਾ ਹੈ।

## ਪ੍ਰਸ਼ਨ/ਉੱਤਰ

2.

ਪ੍ਰਸ਼ਨ-1 ਭਗਤ ਸਿੰਘ ਨੇ ਆਪਣੇ ਮਾਥੀਆਂ ਨਾਲ ਮਿਲ ਕੇ ਕਿਹੜੇ-ਕਿਹੜੇ ਮਹਾਨ ਕੰਮ ਕੀਤੇ?

ਉੱਤਰ ਭਗਤ ਸਿੰਘ ਨੇ ਆਪਣੇ ਮਾਥੀਆਂ ਨਾਲ ਮਿਲ ਕੇ ਅੰਗਰੇਜ਼ ਅਕਸਰ ਮਾਂਡਰਮ ਨੂੰ ਮਾਰਿਆ। ਉਹਨਾਂ ਨੇ ਅਮੈਂਬਲੀ ਵਿੱਚ ਬੰਬ ਸੁੱਟਿਆ ਅਤੇ ਜੇਲ੍ਹ ਵਿੱਚ ਖੁਸ਼ੀ ਭਰੇ ਦਿਨ ਗਏ। ਹੱਸਦਿਆਂ ਹੱਸਦਿਆਂ ਇਕੱਠਿਆਂ ਹੀ ਟਾਂਗੀ ਦਾ ਹੱਸਾ ਚੁੱਕਿਆ।

ਪ੍ਰਸ਼ਨ-2 ਅੱਜ ਭਗਤ ਸਿੰਘ ਦੇ ਨਾਂ ਨੂੰ ਕਿੰਨਾ ਹੱਥ ਚੁੱਕੀ ਕੀ-ਕੀ ਕੀਤਾ ਜਾ ਰਿਹਾ ਹੈ?

ਉੱਤਰ ਅੱਜ ਭਗਤ ਸਿੰਘ ਦੇ ਨਾਂ ਨੂੰ ਕਿੰਨਾ ਹੱਥ ਚੁੱਕੀ ਸਕੂਲਾਂ, ਰਾਜਨਾਂ, ਸਕੂਲਾਂ ਅਤੇ ਯਾਤਰਾਂ ਦੇ ਨਾਂ ਭਗਤ ਸਿੰਘ ਦੇ ਨਾਮ 'ਤੇ ਹੱਥ ਗਏ ਹਨ ਅਤੇ ਉਹਨਾਂ ਦੀ ਜਾਦ ਵਿੱਚ ਖਾਂ - ਖਾਂ ਮੇਲੇ ਚੱਗਦੇ ਹਨ।

ਪ੍ਰਸ਼ਨ-3 ਅਧਿਆਪਕ ਨੇ ਬੱਚਿਆਂ ਦੇ ਦੇਸ਼ ਪਿਆਰ ਦੀ ਪ੍ਰੀਖਿਆ ਕਿਵੇਂ ਕੀਤੀ?

ਉੱਤਰ ਬੱਚਿਆਂ ਅੰਦਰ ਦੇਸ਼ ਪਿਆਰ ਦਾ ਜਜ਼ਬਾ ਵੈਖਣ ਕਈ ਅਧਿਆਪਕ ਨੇ ਬੱਚਿਆਂ ਨੂੰ ਬਾਰਡਰ 'ਤੇ ਜਾ ਕੇ ਚੜ੍ਹਨ ਅਤੇ ਜਿੱਤ ਚੁੱਕੇ ਕਰਨ ਕਈ ਉਤਸ਼ਾਹਿਤ ਕਰਦਿਆਂ ਸੁੱਠਿਆ ਕਿ ਕੋਈ ਬਾਰਡਰ 'ਤੇ ਜਾਵੇਗਾ ਤਾਂ ਬੱਚਿਆਂ ਨੇ 'ਜਾਂ' ਵਿੱਚ ਉੱਤਰ ਦਿੱਤਾ ਸੀ।

ਪ੍ਰ 3 ਦਾਰਾਂ ਵਿੱਚ ਦਰੁੱਤ:

1. ਪ੍ਰਥਮ - ਸਾਰੀ ਹਰ ਰੋਜ਼ ਹੱਥ ਅੱਗੇ ਪ੍ਰਾਥਮਾ ਕਰਨੀ ਚਾਹੀਦੀ ਹੈ।

2. ਦਿਸ਼ਾ - ਅਧਿਆਪਕ ਨੇ ਯਾਤ ਦਿਸ਼ਾ ਨਾਲ ਸਮਝਾਇਆ।

3. ਅਮੈਂਬਲੀ - ਭਗਤ ਸਿੰਘ ਨੇ ਅਮੈਂਬਲੀ ਵਿੱਚ ਬੰਬ ਸੁੱਟਿਆ।

4. ਸ਼ੀਸ਼ੀ - ਭਗਤ ਸਿੰਘ ਨੇ ਦੇਸ਼ ਕਈ ਸ਼ੀਸ਼ੀ ਦਿੱਤੀ।
5. ਬੁੱਤ - ਭਗਤ ਸਿੰਘ ਦੇ ਬੁੱਤ ਜਾਂ - ਜਾਂ ਜੱਗੇ ਹੋਏਗੇ।
6. ਚਾਰਡਰ - ਚਾਰਡਰ ਤੇ ਕੜਾਈ ਜੱਗੀ ਹੋਈ ਹੈ।
7. ਵਿਸ਼ਵਾਸ - ਯੂਮਤਮਾ ਤੇ ਵਿਸ਼ਵਾਸ ਹੋਵੇ।
8. ਜਜ਼ਬਾ - ਚੌਕਿਆਂ ਵਿੱਚ ਦੇਸ਼ - ਭਗਤੀ ਦਾ ਜਜ਼ਬਾ ਹੋਣਾ ਚਾਹੀਦਾ ਹੈ।
9. ਗਲਵੱਕੀ - ਜਾਂ ਨੇ ਆਪਣੇ ਬੱਚੇ ਤੂੰ ਗਲਵੱਕੀ ਯਾ ਕੀ।

4. ਖਾਲੀ ਥਾਵਾਂ ਭਰੋ -

1. ਯੂਰਸਨਾ ਸਭਾ 2. ਸਮੇਂਬੰਦੀ 3. ਸੁਖਦੇਵ
4. ਸਰੂਨ, ਸਫ਼ਰਾਂ ਤੇ ਰਾਜਨਾਂ 5. ਫੌਜੀ 6. ਰਣਜੀਤ ਸੁੱਤਰ

ਵਿਸ਼ਵਾਸ

1. ਤਰਘੋਰ 2. ਗੱਦਾਰ 3. ਸਿੰਘੀਯਨ
4. ਸੰਘੀ ਜੀ 5. ਸਭਾਵਾਂ

- (2)
- 1) ਸੁੱਤੇ ਹੋਣਾ ਯਾ ਹਰੇ ਸੀ।
  - 2) ਕਥੇਤਰਾਂ ਨੇ ਦਾਇਰੇ ਚਰੇ
  - 3) ਸ਼ੀਸ਼ੀ ਨੇ ਦੇਸ਼ ਕਈ ਜਗਾਂ ਦਾਸਿਆਂ।
  - 4) ਅਧਿਆਪਕਾਂ ਨੇ ਉਸਤ ਦਿੱਤੇ।
  - 5) ਬੱਚੇ ਪੂਰੇ ਨਿੱਘਾਂ ਨਾਲ ਯਾਮ ਹੋਏ।

HOMWORK

CLASS - VII (MATHS)

Sets :

CHAPTER 1 : CONCEPT OF SETS

PAGE NO. → ST-3

NUMBERS:

CHAPTER 3 : DECIMALS

PAGE NO. → N-33

DATA HANDLING:

CHAPTER 1 : STATISTICS

PAGE NO. → DH-3

Solve these chapters on your rough Note-book.

HOMWORK  
CLASS - VII (GEOGRAPHY)

CHAPTER - 1  
(Representation of Geographical Features)

1. Tick (✓) the correct option:

(a) — (ii) distance

(b) — (iii) north

(c) — (ii) yellow

(d) — (i) white

(e) — (iii) red

2. Fill in the blanks:

(a) Representative Fraction.

(b) metric

(c) globe

(d) linear

(e) kilometres or metres

3. Explain the following terms:

(a) Verbal scale ⇒ Verbal scale is the expression where the response is given to the respondent using words, whether spoken or written.

(b) Graphic scale ⇒ A graphic scale is a ruler printed on the map and is used to convert distances on the map to actual ground distances.

(c) Scale ⇒ Scale is a ratio between a distance measured on a map and a corresponding distance on the land, connecting the two points represented by the same unit.

(d) R.F  $\Rightarrow$  In this map scale figures representing units (as centimetres, inches) are expressed in the form of the fraction.

4. Define the following:

(a) Causeway  $\Rightarrow$  It is a road or path that is built higher than the area around it in order to cross water or wet ground.

(b) Brackish  $\Rightarrow$  It shows that the water of the well is unfit for drinking and cultivation as it is salty.

(c) Meander  $\Rightarrow$  It is a bend in the river flowing through a plain. Its presence indicates a flat land.

(d) Contours  $\rightarrow$  These are lines shown in brown, joining places of equal height above the sea level.

5. Differentiate between a linear scale and verbal scale.

Ans. Linear scale represents the relationship between the distance on the map and distance on the ground whereas verbal scale is the expression where the response is given to the respondent using words whether spoken or written.

6. Answer in brief:

(i) There are many advantages of drawing a map to scale as they allow for accurate measurements of distances, estimation of flood plains, road, wildlife habitat identification, land use planning etc.

(ii) Each colour used on maps has its own significance and they provide identification to many features such as vegetation and water. Colours also represent natural and man-made features of the earth. Moreover, the colours are universally accepted both for interpretation of survey sheets and map pointing.

(iii) (a) Measuring distance in a straight line or 'as the crow flies'  $\Rightarrow$  It can be measured directly by using the scale or with the help of a divider. The two legs of the divider are placed on the two points and then by placing it on the linear scale, the distance can be calculated.

(b) To measure the distance of a curved road, river or canal  $\Rightarrow$  Take a piece of thread, put its edge at the starting point and move along the curve of the river, along with the thread. Mark the end point and stretch the thread along the linear scale and calculate the distance.

(iv) (a) Topographical maps are very useful as they provide useful information to engineers, surveyors, town planners, tourists and geographers. They are also useful for navigation.

(b) They are very important as they also show man-made features such as towns, villages, buildings, roads, canals, bridges and other cultural features in detail.

## Long-Answer Questions

1. Explain the ice-water interconversion on the basis of intermolecular force.
2. Discuss why the shape of a solid is fixed whereas that of a liquid or a gas is not.
3. Why is a solid not compressible but a gas is? Explain.
4. Describe activities to show the thermal expansion of a solid, a liquid and a gas. Explain expansion on heating and contraction on cooling.

## Objective Questions

Choose the correct option.

1. Ice melts at  $0^{\circ}\text{C}$ . Water freezes at
 

(a) $0^{\circ}\text{C}$	(b) $5^{\circ}\text{C}$	(c) $50^{\circ}\text{C}$	(d) $100^{\circ}\text{C}$
-------------------------	-------------------------	--------------------------	---------------------------
2. Mercury melts at  $-39^{\circ}\text{C}$  and boils at  $357^{\circ}\text{C}$ . Ordinarily it will exist in the
 

(a) solid state	(b) liquid state	(c) gaseous state
-----------------	------------------	-------------------
3. Which of the following substances is an element?
 

(a) Water	(b) Sand	(c) Oxygen	(d) Carbon dioxide
-----------	----------	------------	--------------------
4. Which of the following substances is a compound?
 

(a) Carbon dioxide	(b) Hydrogen	(c) Nitrogen	(d) Sulphur
--------------------	--------------	--------------	-------------
5. Which of the following can be split into simpler substances?
 

(a) Sulphur dioxide	(b) Sulphur	(c) Nitrogen	(d) Carbon
---------------------	-------------	--------------	------------

Fill in the blanks.

1. The space anything occupies is called its ..... (mass/volume)
2. The amount of matter anything contains is called its ..... (mass/volume)
3. Matter exists in ..... states. (two/three)
4. The melting point of a solid is the same as the ..... point of the corresponding liquid. (boiling/freezing)
5. A ~~an~~ ..... is a substance that cannot be broken into simpler substances by chemical means. (element/compound)
6. A ~~an~~ ..... can be broken down into simpler substances by chemical means. (element/compound)
7. A molecule of an element is made up of atoms of ..... kind(s). (the same/different)
8. A molecule of a ~~an~~ ..... is made up of atoms of two or more kinds. (element/compound)

Write 'T' for true and 'F' for false for the following statements.

1. Matter is made up of very small particles, called <sup>molecules</sup> atoms, which are held together by intermolecular force. *False*
2. The <sup>smaller</sup> greater the intermolecular space, the greater the cohesion. *False*
3. The melting point of ice is the same as the freezing point of water. *True*
4. The atoms are held together in a molecule by a force called chemical bond. *True*
5. Chemical bonds are stronger than cohesive forces. *True*





### Long-Answer Questions

- Describe how filtration is done to separate water from sand.
- Describe a simple experiment to carry out the distillation of water.
- How can ammonium chloride be separated from sand? Give experimental details.
- Describe the technique of paper chromatography.
- How do mixtures differ from compounds?

### Objective Questions

Choose the correct option.

- Which of the following is a homogeneous mixture?
  - An oil–water mixture
  - A sand–water mixture
  - Mist
  - A nitrogen–oxygen mixture
- Which of the following is a heterogeneous mixture?
  - A salt–pepper mixture
  - A fizzy drink
  - A salt solution
  - Air
- Which of the following is an alloy?
  - Iron
  - Gold
  - Stainless steel
  - Copper
- Which of the following methods would you use for separating the pigments of an ink?
  - Filtration
  - Sublimation
  - Distillation
  - Paper chromatography
- Which of the following methods would you use for separating iron from sulphur particles?
  - Magnetic separation
  - Filtration
  - Sublimation
  - Distillation
- Which of the following methods can be used to separate mustard oil and water from a mixture of the two?
  - Magnetic separation
  - Decantation
  - Sublimation
  - Crystallisation

Match columns A and B.

A

- A chalk–water mixture
- A glucose solution
- A fizzy drink
- Smoke
- Air

B

- a gaseous mixture
- a solid–gas mixture
- a homogeneous solid–liquid mixture
- a heterogeneous solid–liquid mixture
- a gas–liquid mixture

## Fill in the blanks.

- The components of a mixture are present in ..... proportion. (any/fixed)
- The components of a mixture ..... retain their properties. (do/do not)
- The components of a mixture ..... be separated by physical means. (can/cannot)
- Water containing dissolved air is a ..... mixture. (gaseous/gas-liquid)
- An alloy is a ..... solid mixture. (homogeneous/heterogeneous)
- Ammonium chloride can be ..... (sublimed/distilled)
- Complete the following table.

	Types of mixture	Example	Method of separation
(i)	A heterogeneous solid-liquid mixture	Muddy water	Sedimentation and filtration
(ii)	<i>Homogeneous liquid mixture</i>	Pigments of an ink	<i>Paper Chromatography</i>
(iii)	A heterogeneous solid mixture containing one soluble constituent	<i>Mixture of salt and sand in water</i>	<i>Filtration and Evaporation</i>
(iv)	A heterogeneous liquid mixture	<i>Mustard oil in water</i>	Using a separating funnel
(v)	<i>Heterogeneous solid mixture</i>	<i>Ammonium chloride and sand</i>	Sublimation

Write 'T' for true and 'F' for false for the following statements.

- Black coffee is a pure substance. *False*
- The components of a mixture chemically react with one another. *False. (Compound)*
- Mist is a homogeneous mixture. *False. (heterogeneous)*
- Paper chromatography is based on the principle of adsorption. *True*
- Distilled water is pure water. *True*

### Postscript

Isn't the feeling you get while crushing a candy between your teeth quite different from that you get while chewing a milk bar? The candy sounds different from the milk bar when crushed because it is crystalline but the milk bar is not. Crystalline solids contain small units called crystals, having definite shapes. Look at the crystals of table salt carefully under a magnifying glass. The crystals have definite shapes. They look alike. With the naked eye, you can see that the crystals of sugar have definite shape and that they are all alike.

Crystals are prepared by a method called **crystallisation**. You can prepare candy by doing this activity with the help of an adult.

**Activity** Heat water in a pan and dissolve some sugar in it. Keep adding sugar and dissolving it by stirring and heating until no more sugar dissolves. Filter the hot solution into a jar. Tie a string to a drinking straw or a pencil and place the straw (or pencil) on the rim of the jar. Now, the string hangs in the solution. Leave the set-up undisturbed for

CLASS - VII  
SUBJECT - CHEMISTRY

[ HOME WORK ]

1. Write the given material on your book and notebook neatly.
2. And also learn the given material.

FOR OFFICE - USE (from chemistry book)

Ch - 1 :- Pg. No. - 9.

Ch - 3 :- Pg. No. - 31, 32

## CHAPTER - 1

### SAQ

Ques 1. What is matter? Give three examples of things made of matter.

Ans:- Anything that occupies space and has mass is called matter. The food we eat, the water we drink and the air we breathe are all made up of matter.

Ques 2. What do you mean by intermolecular force?

Ans:- The molecules are held together by the force of attraction, called intermolecular force or cohesion.

Ques 3. Name the three states of matter and give one example of each.

Ans:- (i) Solid - Ice, Chalk  
(ii) Liquid - Water, Milk  
(iii) Gaseous - Oxygen, Nitrogen

Ques 4. Do gases have a fixed volume as liquids do? Give reasons.

Ans:- A gas does not have fixed volume. It assumes the volume of container because in a gas, the intermolecular force is so weak that the molecules are free to move to every part of the container and occupy its entire volume.

Ques 5. What is interconversion of states?

Ans:- The change in state of matter from one to another is called interconversion of state.

Ques 6. What is sublimation? Name two substances that

sublime.

Ans:- The process of transformation of a substance, on heating, directly from solid state to gaseous state without passing through the intermediate liquid state. Naphthalene and camphor are the substances that sublime.

Ques 7. What is an element? Give three examples.

Ans:- An element is a substance that can not be split into smaller / simpler substances by chemical means.

Examples are :- Hydrogen, Nitrogen, Carbon.

Ques 8. What is a compound? Give two examples.

Ans:- A compound is a substance that can be split or broken down into simpler substances by chemical means.

Examples :- Water, Ammonia

Ques 9. What are atoms and molecules?

Ans:- An atom is the smallest part of an element that takes part in a chemical reaction.

A molecule is the smallest part of an element or a compound that is capable of independent existence.

Ques 10. What forces hold atoms in a molecule and molecules in matter? Which of these forces is stronger?

Ans:- The force that holds any two atoms in a molecule together is called a chemical bond.

Molecules are held together in matter by

intermolecular force or cohesion.

A chemical bond is much stronger than an intermolecular force.

### LAQ

Ques 1. Explain ice - water interconversion on the basis of intermolecular force.

Ans:- In an ice, the molecules vibrate about their mean positions. On being heated, they receive energy from outside and vibrate with a greater energy than before. Gradually, they receive so much energy that they can overcome the strong cohesion of the solid. As a result, the molecules become labile and the solid melts down and converts into liquid state (water).

Ques 2. Discuss why the shape of a solid is fixed whereas that of a liquid or a gas is not.

Ans:- In solid, molecules are so tightly held that they can not move closer to or away from their positions so it has a fixed shape.

In liquid, molecules are not so tightly held as in solids. So, they can slip over one another due to limited movement. So liquids take the same shape of the container.

In gas, intermolecular force is so weak that the molecules are free to move to every part of the container and occupy its entire volume. Thus, a gas assumes the shape of the container.

Ques.3 Why is solid not compressible but a gas is?  
Explain.

Ans:- Because the intermolecular space is very small in solid whereas in gas the intermolecular space is largest. As the intermolecular space increases, the molecules can be pushed together more easily and can be compressed to a very great extent.

Ques.4. Describe activities to show the thermal expansion of a solid, a liquid and a gas. Explain expansion on heating and contraction on cooling.

Ans:- Full activity with diagram → Pg no. - 4.

ANSWER KEY  
CHAPTER-3 (ELEMENTS, COMPOUNDS AND MIXTURES)

SHORT ANSWER QUESTIONS, -

Q1. What is a pure substance?

A → A pure substance is one that cannot be split into simpler substances by physical means such as filtration, sublimation or distillation.

Q2. What is an element? Name the five elements and give their symbols.

A → An element is a substance that cannot be split into simpler substances by chemical means.

	Name	Symbol
1)	Helium	He
2)	Neon	Ne
3)	Nickel	Ni
4)	Magnesium	Mg
5)	Manganese	Mn

Q3. What is a compound? Name five compounds and give their formulae.

A → A compound is a substance that can be split into simpler substance by chemical means.

	Name	Formulae
1)	Water	H <sub>2</sub> O
2)	Carbon mono-oxide	CO



NAME

FORMULAE

- |    |                  |               |
|----|------------------|---------------|
| 3) | Carbon dioxide   | $\text{CO}_2$ |
| 4) | Sulphur dioxide  | $\text{SO}_2$ |
| 5) | Sulphur trioxide | $\text{SO}_3$ |

Q4. If you kindle 1g of hydrogen and 8g of oxygen, will you obtain a pure substance or a mixture.

A → When we kindle a mixture of 1g of hydrogen and 8g of oxygen, we will obtain water which is a pure substance.

Q5. What is a mixture?

A → A mixture is a substance that can be separated into two or more pure substances by a physical means such as filtration, sublimation or distillation.

Q6. Classify the following into pure substances and mixtures.

<u>Mixtures</u>	<u>Pure Substances</u>
Air	Carbon dioxide
A sugar solution	Iron
Blood	Copper
Mud	Water
Ink	Oxygen
	Gold
	Silver
	Sodium chloride
	Nitrogen
	Zinc

Q7. What are the following called?

a) A mixture with same composition and properties throughout - Homogeneous.

b) A mixture, the different parts of which vary in composition and properties - Heterogeneous.

c) The solid that settles when a heterogeneous solid-liquid mixture is allowed to stand - Sediment.

d) The liquid above the solid settling from a heterogeneous solid-liquid mixture - Supernatant.

Q8. Name the method used to separate pure water from a solution of salt.

A) Evaporation.

Q9. The components of what kind of a mixture are separated by dissolution and evaporation? Give an example.

A) A heterogeneous solid mixture containing one soluble constituent. Eg - Mixture of salt and sand in water.

Q10. Define immiscible liquids. Give an example.

A) Immiscible liquids are those which do not dissolve in each other. Eg. - oil and water.

11Q) Name three substances that can sublime.

A) Camphor, Iodine, Ammonium chloride.

12Q) Name a method to separate the pigments of an ink.

A) Paper chromatography.

### LONG ANSWER TYPE QUESTIONS.

1Q) Describe how filtration is done to separate water from sand.

A) Take sand in a beaker or a conical flask. Add some water to the mixture and stir it vigorously. Keep this mixture aside undisturbed. In another beaker, keep one funnel and place the filter paper in the funnel. Now, pour the mixture of sand and water into the funnel. Sand will be left behind on the filter paper and water will come down and be collected in the beaker.

Diagram - P.No. 24 [FIG. 3.5]

2Q) Describe a simple experiment to carry out the distillation of water.

A) In distillation, a liquid is vaporised by being boiled and the vapours are condensed and collected separately. If the liquids were mixed with any solid, the solid

P.T.O.

would not vaporise. The mixture is boiled in a flask and the emerging vapours are cooled in a Liebig condenser and collected in a flask.

Diagram - P-25 (Fig. 3.6)

Q3. How can ammonium chloride be separated from sand? Give experimental details.

A) Ammonium chloride can be separated from sand by sublimation.

Experiment :- Mix some ammonium chloride with sand and keep the mixture in a dish. Cover the mixture with an inverted glass funnel and plug loosely the opening of the funnel with cotton. Heat the dish gently on a wire gauze. Ammonium chloride sublimes and collects in the cotton and cooler part of the funnel whereas sand remains in the dish.

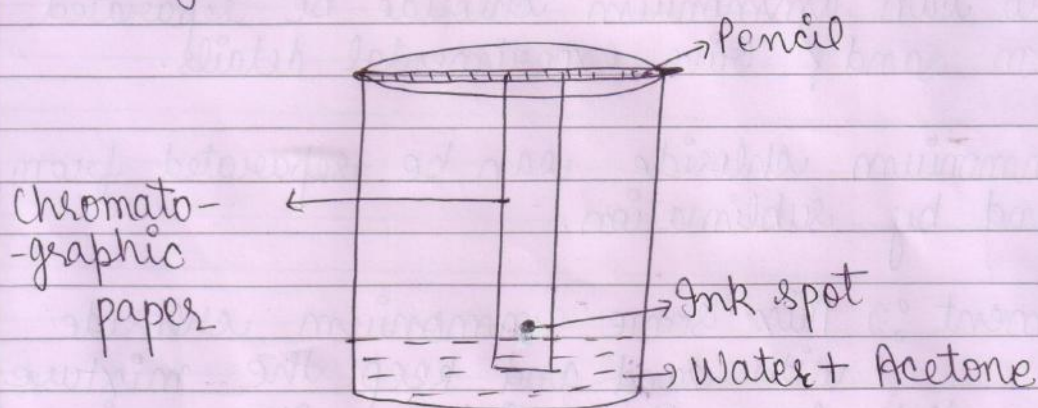
Diagram - P.no. - 26 (fig. 3.10)

Q4. Describe the technique of paper chromatography.

A) This technique is used when all the components of a mixture are soluble in a solvent. Chromatography is based on the principle of absorption. In absorption, a substance called an adsorbate forms a layer of adsorbent. When you place a solution of a mixture over an adsorbent, the different components

of a mixture get absorbed to different extent. So, they move with different speeds on the surface of adsorbent. Thus, the components get separated.

Diagram-



Q5. How do mixtures differ from compounds?

A →	<u>Mixture</u>	<u>Compound</u>
1.	It is an impure substance.	1. It is a pure substance.
2.	It does not have a fixed melting or boiling point.	2. It has a fixed melting point and a fixed boiling point.
3.	The components can be present in any proportion.	3. The constituents must be present in a fixed proportion.
4.	The components can be separated by a physical means.	4. The constituents cannot be separated by a physical means.

## MIXTURE

## COMPOUND

5. The components show their individual properties.

5. The constituents do not show their individual properties.

Pg No - 32

Fill in the blanks :-

7. Complete the following table.

Types of mixture	Example	Methods of separation
(i) A heterogeneous solid - liquid mixture	Muddy water	Sedimentation and filtration.
(ii) Homogeneous liquid mixture -	Pigments of an ink	Paper chromatography
(iii) A heterogeneous solid mixture containing one soluble constituent	Mixture of salt and sand in water.	Filtration and evaporation.
(iv) A heterogeneous liquid mixture	Mustard oil in water	Using a separating funnel.
(v) Heterogeneous solid - mixture	Ammonium chloride and sand	Sublimation

## **Subject-Computer**

### **For Std V to VIII**

- Kindly read the chapters according to the syllabus and solve exercise and do the revision.
- You can download the mobile app from Google App store that provides the solved exercises.
- To download the App type IT Planet W and then Class Eg. IT Planet W class V
- The chapters will be explained in the class later.

CLASS - VII

SUBJECT - PHYSICS

LEARN AND WRITE THE NOTES  
GIVEN BELOW OF

CHAPTER - 1, 3



# ICSE PHYSICS 7

## CHAPTER 1. Measurement

### Check Point 1

- (a) 10000 (b) volume (c) measuring cylinder
- (a) The SI unit of capacity is litre (L).  
(b) When a solid is immersed into a liquid, the volume of the liquid displaced is equal to the volume of the immersed solid.

### Check Point 2

- volumes 2. kilogram/(metre)<sup>3</sup> [kg/m<sup>3</sup> or kg m<sup>-3</sup>]
- mass; volume 4. 1000

### Check Point 3

- (a) speed (b) m/s
- A boy going to his school, a girl walking in a park and a child crawling on the floor are in motion.
- (a) A running train (b) An aeroplane in flight

### TEST YOURSELF

A. 1. area 2. capacity 3. litre 4. 1000 5. different 6. 1000 7. km/h

B. 1. Volume 2. Measuring cylinder 3. Density 4. Speed

C. 1. The surface occupied by an object is called its area. The SI unit of area is square metre.

2. Two multiples of SI unit of area and their values in SI are as follows:

$$1 \text{ hectare} = 100 \text{ m} \times 100 \text{ m} = 10000 \text{ m}^2$$

$$1 \text{ sq km} = 1 \text{ km} \times 1 \text{ km}$$

$$= 1000 \text{ m} \times 1000 \text{ m} = 1000000 \text{ m}^2$$

3. The space occupied by a substance is called its volume. The SI unit of volume is cubic metre.

4. Two submultiples of SI unit of volume and their numerical values in SI unit are as follows:

$$1 \text{ cu cm} = 1 \text{ cm}^3$$

$$= 1 \text{ cm} \times 1 \text{ cm} \times 1 \text{ cm}$$

$$= \frac{1}{100} \text{ m} \times \frac{1}{100} \text{ m} \times \frac{1}{100} \text{ m}$$

$$= \frac{1}{1000000} \text{ m}^3$$

$$\begin{aligned}
 1 \text{ cu mm} &= 1 \text{ mm}^3 \\
 &= 1 \text{ mm} \times 1 \text{ mm} \times 1 \text{ mm} \\
 &= \frac{1}{1000} \text{ m} \times \frac{1}{1000} \text{ m} \times \frac{1}{1000} \text{ m} \\
 &= \frac{1}{1000000000} \text{ m}^3
 \end{aligned}$$

5. The mass of an object contained per unit volume is called density. The SI unit of density is  $\text{kg/m}^3$ .

6. Take two identical beakers. Fill one beaker with liquid A (say water) and the other beaker with liquid B (say kerosene) such that both liquids are up to the same level in the beakers. Now, place one beaker on left pan and other beaker on right pan of a beam balance. The beam is not horizontal but tilted downward on the side of the beaker containing water. This observation clearly shows that equal volumes of different substances have different masses.

7. Take a small piece of the given irregular solid (say a stone piece) which is heavier than water and insoluble in it. Find its mass  $M$  using a beam balance.

Take a measuring cylinder and fill it about half with water. Note down the water level when steady. Let it be  $V_1$ . Now, gently immerse the given solid piece into water. The water level in the cylinder rises to  $V_2$  now.

Then, volume of the solid,  $V = V_2 - V_1$

$$\begin{aligned}
 \therefore \text{Density of the given solid, } D &= \frac{\text{Mass, } M}{\text{Volume, } V} \\
 &= \frac{M}{V_2 - V_1}
 \end{aligned}$$

8. The distance covered by an object in unit time is called speed. The SI unit of speed is m/s.

D. 1. True

2. False; The SI unit of volume is **cubic metre**.

3. False;  $V = \frac{4}{3} \pi r^3$

4. True

5. False; Density is the **ratio** of mass and volume.

6. True

7. True

8. True

E. 1.-(b) 2.-(e) 3.-(a) 4.-(c) 5.-(d)

ie m/v

1. The density is equal to the ratio of mass and volume/ The SI units of mass and volume are kg and  $\text{m}^3$ . That is why, the SI unit of density is  $\text{kg/m}^3$ .

2. The volume of a crystal of potash alum cannot be determined by immersing it into water because being soluble it will dissolve in water.

3. Since the car covers a greater distance in a given interval of time as compared to cycle, so, the speed of a car is more than the speed of a cyclist.

1. The mass of an object contained per unit volume is called density.

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$$

2. The distance covered by an object in unit time is called speed.

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

1.  $\text{kg/m}^3$ ; It is the SI unit of density but others are units of speed.

2. Beam balance; It is used to measure the weight of an object but others are used to measure the volume of an object.

1. Here,

$$\text{radius of circle} = 7 \text{ cm}$$

$$\text{Area of circle} = \pi r^2$$

$$= \frac{22}{7} \times 7 \times 7 = 154 \text{ cm}^2$$

2. Here, length = 180 m, breadth = 105 m

$$\text{Area of school playground} = l \times b$$

$$= 180 \text{ m} \times 105 \text{ m}$$

$$= 18900 \text{ m}^2$$

$$= 1.89 \text{ hectares}$$

or

$$(\because 1 \text{ hectare} = 10,000 \text{ m}^2)$$

3.  $\therefore$

$$\text{Diameter of coin} = 4.2 \text{ cm}$$

$$\text{Radius } (r) = \frac{\text{Diameter}}{2}$$

$$= \frac{4.2}{2} = 2.1$$

$\therefore$

$$\text{Area of coin} = \pi r^2$$

$$= \frac{22}{7} \times 2.1 \times 2.1$$

$$= 22 \times 0.63 = 13.86 \text{ cm}^2$$

4. Here, length = 3 m, width = 2 m, height of water = 1.2 m  
 Volume of water in tank =  $l \times b \times h$   
 $= 3 \text{ m} \times 2 \text{ m} \times 1.2 \text{ m}$   
 $= 7.2 \text{ m}^3$   
 or  
 $= 7.2 \times 1000 \text{ L} \quad (\because 1 \text{ m}^3 = 1000 \text{ L})$   
 $= 7200 \text{ L}$

5. Volume of wooden log (in cylindrical form),

$$V = \pi r^2 h$$

$$= \frac{22}{7} \times \left(\frac{42}{100}\right)^2 \times 3.6$$

$$= \frac{22}{7} \times 0.42 \times 0.42 \times 3.6$$

$$= 22 \times 0.06 \times 0.42 \times 3.6$$

$$= 1.996 \text{ m}^3$$

6. (a) Volume of spherical ball =  $\frac{4}{3} \pi r^3$   
 $= \frac{4}{3} \times \frac{22}{7} \times 3.5 \times 3.5 \times 3.5$   
 $= 179.6 \text{ cm}^3$

- (b) Surface area of spherical ball

$$= 4\pi r^2$$

$$= 4 \times 3.14 \times 3.5 \times 3.5$$

$$= 154 \text{ cm}^2$$

7. Here, volume of stone piece = 88.3 mL - 56.5 mL  
 $= 31.8 \text{ mL}$   
 or  
 $= 31.8 \text{ cm}^3 \quad (\because 1 \text{ mL} = 1 \text{ cm}^3)$

8. Here, mass of the iron piece,  $M = 624 \text{ g}$  and volume,  $V = 80 \text{ cm}^3$

$$\therefore \text{Density of the iron piece, } D = \frac{\text{Mass, } M}{\text{Volume, } V}$$

$$= \frac{624 \text{ g}}{80 \text{ cm}^3} = 7.8 \text{ g/cm}^3$$

9. Here, mass of the stone piece,  $M = 225 \text{ g}$  and volume,  $V = 75 \text{ cm}^3$

$$\therefore \text{Density of the stone piece, } D = \frac{\text{Mass, } M}{\text{Volume, } V}$$

$$= \frac{225 \text{ g}}{75 \text{ cm}^3} = 3 \text{ g/cm}^3$$

10. Given that density of copper,  $D = 8.9 \text{ g/cm}^3$   
 We know that density of  $1 \text{ g/cm}^3 = 1000 \text{ kg/m}^3$   
 $\therefore$  Density of copper in  $\text{kg/m}^3$  is given as:  
 $D = 8.9 \times 1000 = 8900 \text{ kg/m}^3$

11. Here, mass of the object,  $M = 1.35 \text{ kg}$  and each side of cubical object,  $a = 15 \text{ cm} = 0.15 \text{ m}$

$$\therefore \text{Volume of the object, } V = a^3$$

$$= (0.15)^3 \text{ m}^3 = 0.003375 \text{ m}^3$$

$$\therefore \text{Density, } D = \frac{\text{Mass, } M}{\text{Volume, } V}$$

$$= \frac{1.35 \text{ kg}}{0.003375 \text{ m}^3} = 400 \text{ kg/m}^3$$

12. Here, radius of the spherical object,  $R = 3.0 \text{ cm}$   
 and  
 density,  $D = 7 \text{ g/cm}^3$

$$\therefore \text{Volume of the spherical object, } V = \frac{4}{3} \pi R^3$$

$$= \frac{4}{3} \times \frac{22}{7} \times (3.0)^3$$

$$= \frac{792}{7} \text{ cm}^3$$

$$\therefore \text{Density, } D = \frac{\text{Mass, } M}{\text{Volume, } V}$$

$$\therefore \text{Mass of the spherical object, } M = D \times V$$

$$= 7 \times \frac{792}{7} = 792 \text{ g}$$

$$\text{or } = \frac{792 \text{ g}}{1000} \quad (\because 1 \text{ kg} = 1000 \text{ g})$$

$$= 0.792 \text{ kg}$$

13. Here, mass of the given wooden object,  $M = 280 \text{ kg}$   
 and  
 density of the wood,  $D = 800 \text{ kg/m}^3$

$$\therefore \text{Density, } D = \frac{\text{Mass, } M}{\text{Volume, } V}$$

$$\text{Hence, volume of the object, } V = \frac{\text{Mass, } M}{\text{Density, } D}$$

$$= \frac{280 \text{ kg}}{800 \text{ kg/m}^3} = 0.35 \text{ m}^3$$

14. Here,

$$\text{density} = \frac{\text{Mass}}{\text{Volume}}$$
$$910 = \frac{\text{Mass}}{75 \times 60 \times 30}$$

∴

$$\begin{aligned} \text{Mass} &= 910 \times 75 \times 60 \times 30 \\ &= \frac{910 \times 75 \times 1800}{100 \times 100 \times 100} \\ &= \frac{910 \times 75 \times 18}{10000} \\ &= \frac{1350 \times 910}{10000} = 122.8 \text{ kg} \end{aligned}$$

15. Here, volume of the empty density bottle,  $V = 25 \text{ mL} = 25 \text{ cm}^3$   
mass of the empty bottle,  $M_1 = 22.6 \text{ g}$  and mass of the empty  
bottle when filled with liquid,  $M_2 = 43.8 \text{ g}$

∴ Mass of the liquid,  $M = M_2 - M_1 = (43.8 - 22.6) \text{ g} = 21.2 \text{ g}$

∴ Density of the liquid,  $D = \frac{\text{Mass, } M}{\text{Volume, } V}$

$$= \frac{21.2 \text{ g}}{25 \text{ cm}^3} = 0.848 \text{ g/cm}^3$$

or

$$= 0.848 \text{ g/mL} \quad (\because 1 \text{ cm}^3 = 1 \text{ mL})$$

16. Here, mass of the given solid,  $M = 84.2 \text{ g}$ ; Initial volume of water  
in cylinder,  $V_1 = 36 \text{ mL}$  and final volume of water and solid  
 $V_2 = 60 \text{ mL}$

∴ Volume of the solid,  $V = V_2 - V_1$   
 $= (60 - 36) \text{ mL} = 24 \text{ mL} = 24 \text{ cm}^3$

∴ Density of the solid,  $D = \frac{\text{Mass, } M}{\text{Volume, } V}$

$$= \frac{84.2 \text{ g}}{24 \text{ cm}^3} = 3.51 \text{ g/cm}^3$$

17. Here,

$$\begin{aligned} \text{speed} &= \frac{\text{Distance}}{\text{Time}} \\ &= \frac{24}{30} = 0.8 \text{ cm/s} \end{aligned}$$

18. Here,

$$\begin{aligned} \text{speed} &= \frac{\text{Distance}}{\text{Time}} \\ &= \frac{100}{12} = 8.33 \text{ m/s} \end{aligned}$$

36

19. Here,

$$\begin{aligned} \text{speed of the car} &= 36 \text{ km/h} \\ &= 36 \times \frac{5}{18} = 10 \text{ m/s} \end{aligned}$$

20. Here,

$$\begin{aligned} \text{time} &= \frac{\text{Distance}}{\text{Speed}} \\ &= \frac{2.25 \times 1000}{4.5} \\ &= 0.5 \times 1000 \\ &= 500 \text{ s (8 min 20 s)} \end{aligned}$$

21. Here,

$$\begin{aligned} \text{distance} &= \text{Speed} \times \text{Time} \\ &= 4.2 \text{ km/h} \times \frac{40}{60} \text{ h} \\ &= 4.2 \times 0.66 \text{ km} \\ &= 2.8 \text{ km} \end{aligned}$$

22. Here,

$$\begin{aligned} \text{speed} &= \frac{\text{Distance}}{\text{Time}} \\ &= \frac{\text{Circumference of park}}{\text{Time}} \\ &= \frac{2 \times \frac{22}{7} \times 70}{3 \times 60} \\ &= 2.44 \text{ m/s} \end{aligned}$$

1. (a) 2. (d) 3. (b) 4. (d) 5. (b) 6. (b) 7. (a) 8. (b)

## CHAPTER 2. Motion

### Check Point 1

1. An object is said to be in a state of motion if its position changes with time with respect to its surroundings.
2. Motion shown by a car moving on a hill road is a 'complex' (or multiple) motion.
3. In rotatory motion, an object moves about a fixed axis or a fixed point, without changing its position as a whole.  
Motion of a merry-go-round and motion of a spinning *charkha* are examples of rotatory motion.
4. A combination of two or more types of motion shown by an object simultaneously is called a complex motion.

37

8. Here, average speed =  $\frac{\text{Total distance covered}}{\text{Total time taken}}$   
 $= \frac{24.5 + 24.5}{30 + 40} = \frac{49}{70} = 0.7 \text{ km/min}$

- K. 1. (d) 2. (a) 3. (a) 4. (b) 5. (c) 6. (b)

### THINK ZONE

- No, because distance covered is the actual path length which is different as the paths taken by them may be straight or curved.
- No, speed does not depend on the direction of motion of an object.

## CHAPTER 3. Energy

### Check Point 1

- (a) joule (b) Kinetic (c) potential
- (a) The capacity of doing work is called energy.  
(b) 1 calorie = 4.186 joule ( $\approx 4.2$  joule)

### Check Point 2

- (a) heaters (b) muscular energy (c) heat energy
- The energy contained in the nucleus of an atom is called nuclear energy.
- Electrical energy is the most commonly used energy in our daily life.

### Check Point 3

- (a) Energy (b) sound; electrical (c) photosynthesis
- (a) CFLs and electric bulbs

NO, (b) Energy can neither be created nor be destroyed but it can be transformed from one form into another form.

### TEST YOURSELF

- A. 1. joule 2. Gravitational potential 3. kinetic 4. elastic potential  
 5. chemical 6. Electrical 7. nuclear 8. muscular  
 9. electrical; heat 10. chemical; electrical
- B. 1. Kinetic energy 2. Photosynthesis 3. Sound energy  
 4. Nuclear energy 5. Chemical energy 6. Electrical energy
- C. 1. Energy of an object is said to be one joule if it has the capacity to do one joule of work.

- The capacity of doing work is called energy.
- The energy possessed by a magnet is called magnetic energy.
- The energy possessed by muscles of human or animal's body is called muscular energy.
- Whenever energy gets converted from one form into another form, the total energy remains unchanged. The energy lost in one form exactly reappears in the other form and total energy remains unchanged.

Same as Check Pt-3 2(b)

D. 1.	<b>Light energy</b> Light is a form of energy which enables us to see the objects all around us.	<b>Sound energy</b> Sound is a form of energy which causes the sensation of hearing.
2.	<b>Kinetic energy</b> The energy possessed by an object in motion is called its kinetic energy.	<b>Potential energy</b> The energy stored in an object when it is at rest is called its potential energy.
3.	<b>Solar energy</b> The energy emitted by the sun in the form of light and thermal radiations is called solar energy.	<b>Nuclear energy</b> The energy contained in the nucleus of an atom is called nuclear energy.

- E. 1. Energy of an object is measured by its capacity to do work. It is measured in joule.
- Light energy and heat energy are produced in a fire. These energies come from the chemical energy stored in wood, coal, petrol, etc.
  - The process of changing energy from one form to another form is called transformation of energy, e.g., a cell phone transforms electrical energy into sound and light energy, a microphone transforms sound energy into electrical energy.
  - The energy emitted by the sun in the form of light and thermal radiations is called solar energy. Solar energy is very important as plants trap it and synthesise food for all living things. Also, solar cookers used for cooking and solar heaters used for heating water use solar energy.
  - Light is a form of energy which enables us to see the objects clearly all around us. The sun, CFLs, LED lamps, etc., are the main sources of light. Green plants also use sunlight in preparing food through photosynthesis process. Incident rays of light in photographic film cause a chemical change due to which the image is recorded on the film.

6. Energy is the ability to do work. [More the work to do, more energy is required. The energy stored in your body helps you to do work.] A person gets tired on doing work. Work-energy relationship states that if an object does work, then its energy decreases. On the other hand, when the work is being done on an object, the energy of the object increases.

7. The two kinds of mechanical energy are kinetic energy and potential energy.

F. 1. True

2. True

3. True

4. True

5. False; When a matchstick is rubbed against a matchbox, heat and light are produced at the expense of **chemical** energy.

6. True

7. True

8. False; **Heat** energy is produced on burning a fuel.

G. 1.-(b) 2.-(e) 3.-(a) 4.-(c) 5.-(d)

H. 1. When water falls from a height, its potential energy is converted into kinetic energy due to which it can rotate the turbine in hydel power plant.

2. Since electrical energy is used to light bulbs, to run fans, washing machines, computers, TVs, coolers, fridges, etc., it is considered the most commonly used energy in our daily life. Also, electricity can be stored and transmitted from one place to another place and can be converted into heat, light and sound energy easily.

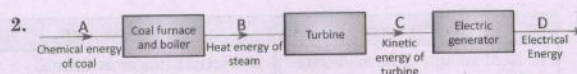
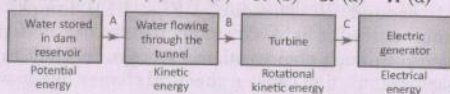
3. During interconversion of energy, energy disappeared in one form exactly reappears in the other form because as per law of conservation of energy, energy can neither be created nor be destroyed.

I. 1. **Moon**; The moon is a heavenly body while others are kinds of energy.

2. **Microphone**; Microphone transforms sound energy into electrical energy whereas electric bulb, tubelight, CFL lamp and LED bulb transform electrical energy into light energy.

J. 1. (a) 2. (a) 3. (d) 4. (c) 5. (b) 6. (a) 7. (d)

K. 1.



### THINK ZONE

- Kinetic energy.
- Kinetic energy.
- First of all the chemical energy stored in waste is transformed into heat energy which is then transformed into electrical energy.

## CHAPTER 4. Light Energy

### Check Point 1

1. polishing 2. same 3. lateral inversion 4. virtual

### Check Point 2

1. (a) black (b) green; white (c) cyan  
 2. (a) Milk appears white because milk reflects all the light wavelengths and absorbs none.  
 (b) White colour

### TEST YOURSELF

- A. 1. diffused 2. A virtual 3. laterally 4. plane 5.  $3 \times 10^8$   
 6. primary 7. yellow 8. reflected  
 B. 1. Reflection of light 2. Incident ray 3. Angle of reflection  
 4. Lateral inversion 5. Secondary colours  
 C. 1. **Reflection of light**: The phenomenon of bouncing back of light from a surface is called reflection of light.  
 2. **Lateral inversion**: Interchange of left and right sides of an object in the image formed by a plane mirror is called lateral inversion.  
 3. **Primary colours**: The colours which cannot be formed by other colours are called primary colours, i.e., red, green, blue.  
 4. **Colour subtraction**: The phenomenon due to which an opaque object selectively reflects light of few colours out of white light and absorbs light of other colours is called the colour subtraction.

D. 1.

Regular reflection	Diffused reflection
Reflection of light taking place from a smooth and polished surface is known as regular reflection.	Reflection of light taking place from an opaque, rough and uneven surface is known as diffused reflection.

Std - VII IV - Std  
BIOLOGY

LEARN AND WRITE THE NOTES GIVEN  
BELOW OF CH-7, 8

# ICSE PHYSICS 6

## CHAPTER 1. Matter

### Check Point 1

1. (a) space (b) molecules (c) attract
2. (a) Molecule (b) Plastic, Rubber, Water, Oil and Air

### Check Point 2

1. (a) liquid (b) Solid (c) gas
2. (a) Solid  
(b)  A liquid can be transformed into a gas on heating through **YES** evaporation process.

### TEST YOURSELF

- A. 1. solid, gas 2. minimum/least 3. weak 4. liquid 5. gas
- B. 1. Matter 2. Molecule 3. Intermolecular force 4. Rigidity 5. Gas
- C. 1. Anything which has mass and occupies space is called matter.  
2. The smallest part of a substance that can exist independently in nature is called a molecule.  
3. The substance which has definite volume but no definite shape of its own is called a liquid.  
4. The substance which has neither a definite volume nor a definite shape of its own is called a gas.

D. 1.

Solids	Liquids
(a) Solids have a definite volume and definite shape of their own.	(a) Liquids have definite volume but do not have definite shape of their own.
(b) They do not flow but can be heaped.	(b) They can flow but cannot be heaped.
(c) They are rigid and cannot be compressed.	(c) They are nonrigid and can be slightly compressed.

2.

Liquids	Gases
(a) Liquids have definite volume but do not have definite shape of their own.	(a) Gases have neither definite volume nor definite shape of their own.
(b) Liquids can flow from higher to lower level.	(b) Gases can flow in all directions.
(c) Liquids are slightly compressible.	(c) Gases are highly compressible.



E. 1. Anything which has mass and occupies space is called matter. 1.-(b) 2.-(c) 3.-(a)

2. Aim: To show that water occupies space.

Materials Required: A glass tumbler, a table and water.

Procedure: Take a clean, dry glass tumbler and put it on the table. Now, gently pour water into the tumbler.

Observation and Conclusion: The water level in the tumbler goes on rising as more and more water is poured into it. A limit may come when the tumbler is filled to its brim. If more water is poured into the tumbler, then it will overflow and spread on the table. This activity shows that water occupies space.

3. Molecules are the smallest particle of a substance which can independently exist in nature. They are formed by combining one or more atoms together.

4. Three characteristics of molecules are as follows:

(a) Molecules of a substance are extremely small in size. They cannot be seen even with the help of a microscope.

(b) Molecules of a substance attract each other. This attractive force amongst molecules of a substance is called intermolecular force.

(c) All molecules of a particular substance are identical in shape size and mass.

5. Sugar and apple are solid substances.

6. Hydrogen and biogas are gaseous substances.

7. The three characteristics of liquids are as follows:

(a) Liquids have definite volume but no definite shape of their own.

(b) The molecules of liquids are less closely packed.

(c) The intermolecular forces in liquids are less strong as compared to solids.

8. A list of twenty objects is given below:

Pencil, petrol, nitrogen, oil, chair, oxygen, duster, milk, water, stapler, CNG, book, table, alcohol, stone, mercury, water vapour, sponge, blackboard, juice.

Solids	Liquids	Gases
Pencil	Petrol	Nitrogen
Chair	Oil	Oxygen
Duster	Milk	CNG
Stapler	Water	Water vapour
Book	Alcohol	
Table	Mercury	
Stone	Juice	
Sponge		
Blackboard		

(i) 1. True

2. False; Molecules **cannot** be easily seen by the use of a microscope.

3. False; Matter particles **exert intermolecular force** on each other.

4. True

5. True

6. False; Gases have neither finite shape nor finite **mass. Volume**

1. **Coconut oil**; It is liquid but others are solid.

2. **An antiseptic tablet**; It is solid but others are liquid.

3. **Sodawater**; It is liquid but others are gas.

1. (c) 2. (d) 3. (b) 4. (d)

#### THINK ZONE

Maximum intermolecular space	Minimum intermolecular space
Air	Stone
Carbon dioxide	Milk
Steam	Wood
CNG	Book
	Pencil

• Iron piece is solid and rigid. So, it cannot be compressed.

• The constituent molecules of a solid are closely packed because intermolecular space amongst the molecules of a solid is very small.

• The molecules of solids are held tightly together by strong forces of attraction. So, they have fixed position and cannot move. Therefore, solids do not flow.

## CHAPTER 2. Physical Quantities and Measurement

Check Point 1 **1. A Standard unit of a physical quantity is a well defined standard in term of which similar quantities can be measured**

1. A standard unit of a given quantity is an appropriate measure that has some definite and convenient amount of the quantity which remains the same for every person at every place.

2. Three common unit systems being followed in daily life are (i) CGS system, (ii) FPS system, and (iii) MKS (SI) system.

3. (a) a kilo = 1000 (b) a centi =  $\frac{1}{100} = 0.01$

(c) a milli =  $\frac{1}{1000} = 0.001$  (d) a hecto = 100

## CHAPTER 3. Force

### Check Point 1

1. (a) Force (b) pulls (c) motion
2. (a) Force is a push or a pull which changes or tends to change the state of rest or uniform motion along a straight line. Force may also change shape or size of an object.
  - (b) Pushing the almirah and pushing a striker on carom board.
  - (c) A force can change the shape of an object, e.g., if a balloon is compressed with fingers, its shape changes.

### Check Point 2

1. newton 2. contact force 3. noncontact force

### Check Point 3

1. (a) opposes (b) less (c) friction
2. (a) Friction is a contact force that comes into action whenever a body moves or tries to move over a surface. It always acts in a direction opposite to that of motion.
  - (b) Two advantages of friction are as follows:
    - (i) Friction helps us to tie a knot.
    - (ii) Friction helps to construct a building.
  - (c) Oil and grease are used as lubricant in machinery.

### TEST YOURSELF

- A. 1. force 2. force 3. contact force 4. opposite 5. reducing  
6. less 7. Streamlined
- B. 1. Contact force 2. Friction 3. Streamlined shape  
4. Resultant force
- C. 1. A push or a pull applied on an object is known as force.  
2. The force acting between two objects when they are in actual contact with each other is known as contact force.  
3. Friction is a contact force that comes into action whenever a body moves or tries to move over a surface.  
4. The force of friction acting on an object which tends to move over a surface but does not actually move is called static friction.  
5. The force of friction which opposes rolling motion of an object over a given surface is called rolling friction.

Contact force	Noncontact force
(a) The force which acts by directly touching the object is called contact force.	(a) The force which acts from a distance without directly touching the object is called noncontact force.
(b) Muscular, mechanical and frictional forces are contact force.	(b) Gravitational, magnetic and electrostatic forces are noncontact force.

Static friction	Sliding friction
(a) The force of friction that comes into play when one object tends to move over a surface but there is no actual motion of the object in spite of a force being applied on it is called static friction.	(a) The frictional force exerted by a surface on an object when it is actually sliding on the surface is called sliding friction.
(b) Static friction is more than sliding friction.	(b) Sliding friction is less than static friction.

Pushing force	Pulling force
A force applied on pushing an object ahead is called pushing force, e.g., a person pushing an almirah.	A force applied on pulling an object back is called pulling force, e.g., a person pulling a cart.

1. A man pulling a cart and a fielder catching a ball are two examples of force as a pull.
2. Three important effects of a force are as follows:
  - (i) Force may start motion in an object or may change the speed of its motion.
  - (ii) It may change the direction of motion.
  - (iii) It may change the shape or size or both of an object.
3. Take a spring and stretch it by applying force at its ends. In this process, the size of the spring increases. Again, take a sheet of paper and crumple it up into a small bead, the shape and size of the paper change. Thus, a force can change the shape or size or both of an object.
4. Force of friction is that contact force which opposes motion of one object on the surface of another object. Force of friction always acts in a direction opposite to the direction of motion of the given object.
5. The two factors which affect the force of friction are:
  - (a) Roughness of the surfaces in contact.
  - (ii) Mass of the moving object.

6. An object experiences more friction while sliding on a wood surface.
7. The three disadvantages of friction are as follows:  
 (i) Friction always opposes motion of a body over another.  
 (ii) Our shoes and tyres of vehicles wear out due to friction.  
 (iii) Heat produced due to continuous use of machinery causes wear and tear of its moving parts.
8. We can reduce friction by following methods:  
 (i) By making the surfaces smooth and polished  
 (ii) By using oil and grease as lubricants in moving machine parts  
 (iii) By using wheels and rollers  
 (iv) By using ball bearings  
 (v) By streamlining of cars, boats, aeroplanes, ships, etc.
9. (a) We need higher friction at the steps of staircase and ramps of buildings.  
 (b) We need higher friction at sloping concrete roads made of hills.
10. The three kinds of friction are rolling friction, sliding friction and static friction.
11. The rolling friction can be minimised by using wheels and ball bearings.
- F.1. **Sit:** All other terms mean application of some force but sit does not mean application of force.
2. **Resultant force:** It occurs when two forces act in opposite directions in the same direction while others are types of frictional force.
3. **Grooved tyres:** Tyres are grooved so as to increase friction. However, all other terms are meant for reducing friction.
- G. 1. False; A force can start and stop motion.  
 2. True  
 3. True  
 4. True  
 5. False; Friction is a **contact** force.  
 6. False; The force of friction is **useful as well as harmful**.  
 7. True  
 8. True  
 9. False; Furniture is polished so as to **reduce friction**.  
 10. False; Rolling friction is **less** than sliding friction.
- H. 1.-(d) 2.-(a) 3.-(b) 4.-(c)
- I. 1. When a cyclist stops pedalling the bicycle, it comes to rest slowly due to force of friction acting between its tyres and the road.
2. When a player kicks the football with his foot, he applies force on it and as a result, the football starts moving on the ground.
3. A rolling ball stops after moving some distance on account of the frictional force due to the ground.
4. When two or more persons apply force on a heavy box simultaneously in the same direction, the resultant force, being sum of the individual forces, is increased. As a result, they are able to push the box.
5. Tyres of vehicles become hot after a long drive on account of friction acting between tyres and road.
6. The moving parts of machinery are greased from time to time so as to reduce friction between them.
7. During winter, we can warm our hands by rubbing them together because rubbing of hands generates heat due to friction.
8. The shape of boats and ships is streamlined so as to reduce the friction due to water.
9. Vehicles give less mileage when being driven on a rough road because a part of the fuel consumed is spent in overcoming the friction.
10. Tyres of trucks are grooved to increase friction to make them move smoothly on the road.
11. Silk thread is slippery as compared to jute string. So, jute string offers more friction than silk thread, that is why, a knot tied in jute string does not slip easily.
- J. 1. (d) 2. (c) 3. (a) 4. (b) 5. (b) 6. (d)
- K. 1. A footballer is applying a force on the football. The football starts to move when force is applied on it.  
 2. Resultant force =  $40\text{ N} + 30\text{ N} = 70\text{ N}$   
 The resultant force is 70 N because both the boys are applying force in the same direction.

#### THINK ZONE

- When we kick a football, it stops after moving some distance due to the friction acting between the football and the ground.
- The body of birds pointed on both the ends means that their body is streamlined which helps them to reduce friction due to air and fly easily.
- People sprinkle talcum powder on the carom board because it reduces friction on the board. As a result, people hit the coins with a striker smoothly on the board.

## ICSE BIOLOGY-7

### CHAPTER 1. Tissues

#### Check Point 1

1. Protoplasm
2. organic
3. unicellular
4. organs

#### Check Point 2

1. Apical meristem
2. Meristematic tissue
3. Xylem parenchyma
4. Phloem

#### Check Point 3

1. True
2. False
3. True
4. True
5. False

#### TEST YOURSELF

1. more complex
  2. food chain
  3. Epithelial
  4. dead; woody
  5. conducting
  6. nerve
1. Organ
  2. Plasma
  3. Cuticle
  4. Dendrites
  5. Ecosystem
  6. Xylem parenchyma
1. **Collenchyma** tissue is formed of elongated, parenchymatous cells with their walls thick at the corners. It provides mechanical support to the young stem and leaves.  
**Sclerenchyma** tissue is formed of long, dead and fibre-like cells. It gives mechanical support to the plant.
  2. **Cuboidal** epithelium is formed of cube-like cells, arranged in a single layer. It performs the function of absorption, secretion and forms gametes in testes and ovaries.  
**Squamous epithelium** is formed of flattened, scale-like cells. It protects the underlying tissues.
  3. **Ligament** is formed of yellow elastic fibrous tissue. It connects two bones together at the joints.  
**Tendon** is formed of white nonelastic fibrous tissue. It joins skeletal muscles to the bones.
  4. **Connective tissue** holds various tissues and organs together, and fills the space between the organs. It provides support to the body and body organs.  
**Muscular tissue** is a contractile tissue. It forms the flesh of the body. It helps in the movement of body parts and in locomotion.
  5. **Meristematic tissue** is formed of actively dividing young cells. It helps in the growth of the plant.  
**Permanent tissue** is formed of nondividing and differentiated cells. These cells specialised to carry out specific functions. It

protects and supports the plant body and transports materials from one part of the plant to the other part.

1. Phloem
  2. Meristematic tissue
  3. Sclerenchyma tissue
  4. Skeletal tissue
  5. Connective tissue
  6. Muscular tissue
1. Epidermis protects the underlying tissues.  
2. Sclerenchyma provides mechanical strength and rigidity to the plant body.  
3. Xylem vessels act as long pipes for the transport of water and minerals from roots up to the leaves.  
4. Adipose tissue stores fats in its cells.  
5. Cardiac muscles help in pumping blood to all parts of the body.  
6. Red blood cells (RBCs) supply oxygen to cells of the body.
1. Different levels of organisation below organism level are molecular level, cellular level, tissue level, organ level and organ system level.  
2. When many organs work together to perform one major life function, they form an organ system. The different organ systems of body represent the organ system level of organisation.  
The organs of excretory system are kidneys, ureters, urinary bladder and urethra.  
3. Apical meristem is responsible for increase in the height of a plant. It is located at the tips of roots, shoots and branches.  
4. Different types of epithelial tissues are:
    - (a) Squamous epithelium: It protects underlying tissues in the body.
    - (b) Cuboidal epithelium: It helps in absorption and secretion, and in the formation of gametes in ovaries and testes.
    - (c) Columnar epithelium: It helps in absorption and secretion.
    - (d) Ciliated epithelium: Its ciliary movement makes the substances move in the cavity of organ.
    - (e) Glandular epithelium: It secretes digestive juices, oil (sebum), tears and milk in females.
    - (f) Sensory epithelium: It collects sensory stimuli.
  5. Characteristic features of permanent tissue are as follows:
    - (a) Permanent tissue is derived from the division of meristematic cells.
    - (b) Its cells do not divide because they become differentiated.
    - (c) Its cells may be alive or dead.
    - (d) Its cells have different shapes related to the function they perform.

(d) Its cells have thick cell wall and large vacuole.

(e) The nucleus is displaced to one side because of the presence of vacuole in the centre of cell.

6. The tissue which provides support and strength to the body is called supporting tissue.

Supporting tissues in plants are of three types: Parenchyma, collenchyma and sclerenchyma.

Supporting tissue in animals is skeletal connective tissue.

7. Functional unit of nervous tissue is nerve cell called neuron.

● Axon receives impulses from cyton and passes them to other neurons.

● Dendrons receive impulses from axon endings of neighbouring neurons and bring them up to cyton.

8. The meristem which is located at the base of internodes and leaves is called intercalary meristem. It increases the length of organs and branches.

Lateral meristem is found as cambium in the vascular bundles of dicot stem and root, and as cork cambium in cortex region of tree trunks. It increases the girth of plant.

9. White blood cells (WBCs) fight and kill germs that enter the body. Therefore, they are called the soldiers of the body.

G. 1.-(c) 2.-(d) 3.-(f) 4.-(e) 5.-(a) 6.-(b)

H. 1. False; Permanent tissue is formed of **nondividing, differentiated** cells.

2. True

3. False; **Striated** muscles are voluntary muscles. (or Cardiac muscles are **involuntary** muscles.)

4. False; **Parenchyma** cells form ground tissue in plants.

5. False; Skin is connected with the body surface by **areolar** tissue.

6. True

7. False; Phloem is formed of long, tubular cells that transport **food**. (or **Xylem** is formed of long, tubular cells that transport water.)

I. 1. Simple permanent tissue

2. Complex permanent tissue (xylem, phloem)

3. Adipose tissue 4. Skeletal tissue 5. Fibrous connective tissue

6. Nervous tissue 7. Muscular tissue (cardiac muscles)

J. 1. Cartilage; It is skeletal tissue, others are fluid connective tissues.

2. Epidermis; It is a protective tissue, others are supporting tissues.

3. Nerve fibre; It is a bundle of axons of several neurons, others are parts of a neuron.

4. Matrix; It is the ground substance of connective tissue, others are fluid connective tissues.

5. Cork cambium; It is a meristematic tissue, others are permanent tissues.

K. 1. (b) 2. (b) 3. (a) 4. (b) 5. (a) 6. (a)

L. 1. A- Cyton, B- Dendrites, C- Dendron, D- Axon

(a) Neuron

(b) ● Part A- Cyton receives messages from dendrons and passes them to axon.

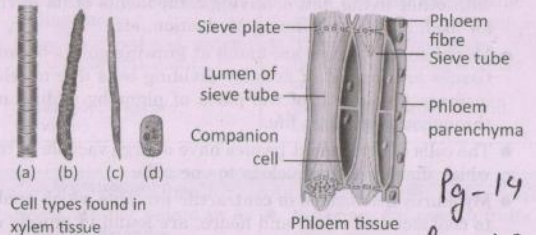
● Part C- Dendron receives messages from adjacent neuron through dendrites and passes them to cyton.

(c) Nervous tissue

(d) In the brain and spinal cord.

2. (a)

Pg-14  
fig-1.8



Cell types found in xylem tissue

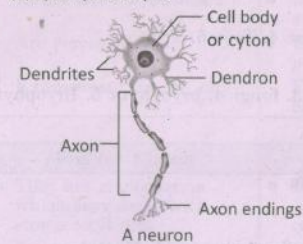
(a) xylem tracheid,

(b) xylem vessel,

(c) xylem fibre, and

(d) xylem parenchyma

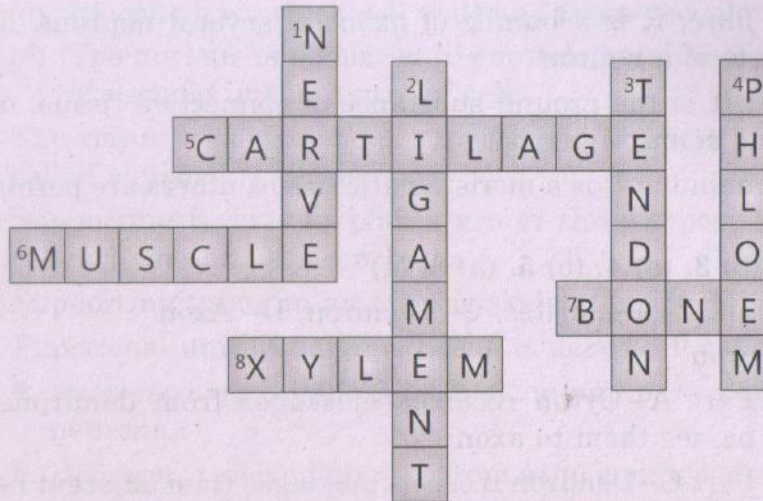
(b)



Pg-14  
fig-1.9

Pg-19  
fig-1.16

M.



### THINK ZONE

- No living organism can survive in isolation because it interacts with other living and nonliving components of its environment for food, oxygen, shelter, reproduction, etc.
- Meristematic tissues are found at growing points because these tissues are formed of actively dividing cells due to which they increase the length of the parts of plant by adding new cells throughout the plant life.
- The cells of permanent tissues have a large vacuole in the centre which displaces the nucleus to one side.
- Myofibrils are formed of contractile proteins which enable them to contract and relax, and hence, are found in muscle cells.

## **CHAPTER 2. Kingdom Classification**

### Check Point 1

1. False 2. True 3. False 4. True 5. True

### Check Point 2

1. acellular 2. colonial 3. fungi 4. bryophyta 5. Bryophytes  
6. sori

### Check Point 3

1. False 2. True 3. True

### TEST YOURSELF

- A. 1. gymnosperms 2. sori 3. mushroom 4. Mosses  
5. gymnosperms

### THINK ZONE

- In myelinated nerve fibre, nerve impulse jumps from one node of Ranvier to the other. Therefore, speed of nerve impulse is more in myelinated nerve fibre.
- The cerebrum is the largest part of human brain. Therefore, it contains a large number of neurons in it.

### CHAPTER 8. Allergy ✓

#### Check Point

1. Allergy 2. rhinitis 3. allergy 4. shots

#### TEST YOURSELF

- A. 1. Allergens 2. Immune system 3. Allergic asthma  
4. Anaphylaxis or Anaphylactic attack
- B. 1. Anaphylaxis, also called anaphylactic attack, is the most dangerous allergic reaction in which large amount of histamine is released by mast cells. This results in the development of rashes on the skin; swelling of face, lips and tissue around mouth and tongue instantly; low blood pressure and shortness of breath which leads to sudden death.
2. Hyperactivity is the over-reaction of immune system to certain substances which are harmless to most normal people. In this state, the person is said to be allergic to that particular substance.
3. Immune system is the system of our body which defends the body against all types of microbes and toxic substances.
- C. 1. Seasonal allergies cause sneezing, coughing, runny nose, itchy and watery eyes and general body ache.
2. Seasonal allergy appears only during specific season and goes with season. It may be spring allergy, summer allergy, fall allergy, winter allergy or hay fever. It is caused by pollen grains of grasses and weeds, moulds and dust mites. On the other hand, perennial allergy can appear at any time the year round. It may be caused due to dust, moulds, cockroaches, feathers, pet dander, insect bite or by some food.
3. Following two methods are used to identify the causative allergen:
- (a) **Skin-prick test or prick testing or puncture testing:**  
In this test, small amounts of suspended allergens or their extracts are injected under the patient's skin and their inflammatory reactions are observed.

(b) **Blood test:** It involves measuring the concentration of specific IgE antibodies in the blood. Higher is its value, the greater is the likelihood of symptoms.

4. Mouth, nose and skin are the three entry routes of allergens in human body.
5. The substances that trigger allergic reaction in the body are called allergens. Milk, egg and fish are the allergens responsible for food allergy.
- D. 1. False; **Sensitisation** is a basic reaction to a simple allergen.  
2. True  
3. True  
4. False; Pollen is responsible for **both seasonal and perennial allergies**.  
5. False; Allergies are mainly diagnosed by **allergy tests**.  
6. False; Cosmetic allergy is a **perennial allergy**.
- E. 1. (a) 2. (b) 3. (b) 4. (a) 5. (c) 6. (a)
- F. 1. POLLEN 2. HAY FEVER