St.Gregorios school Dwarka

Class 7 English Worksheet (2020-21)

Literature:-

L-1—Three questions (Leo Tolstoy)

A Brief Summary:-

Once there was a king who thought that to be a successful ruler he must know the answer for the following 3 questions;

1. What is the right time to begin something?
2. Which people should be listened to ?
3. What is the most important thing to do?

Many messengers were sent into different directions to know the answers. For the first question some felt the king should follow a timetable. But others felt it impossible to decide the right time. For the second question some advised that the king should follow councillors, others were of the opinion that they should follow priests, doctors, or soldiers. For the third question some said that one should follow science while others were of the opinion to follow religion. But the king was unhappy with all these answers.

The Hermit-

The king approached a hermit. He was sowing the seeds .He was digging and digging. Eventhough the king asked for the answers the hermit ignored him. The king offered his help. At that time a bearded man was running towards them. He was a wounded man with bleeding in the stomach. The king cleaned his wound and dressed him.Then they took him inside the house.Later they knew that the man was the one who came to take revenge on the king as he had killed his brother and taken his property. But king's bodyguards who knew this wounded him. Now he regretted and apologized.

The king was pleased to turn his enemy into a friend. Thus the wounded man became the most important man. Nursing the wounded man was the most important work to do . To do good for others as we are sent for this noble cause is the greatest job.The most important time is the present time as we have the power to act.

Thus the king got happy with the hermit's answers for the three questions.

Vocabulary Ex

I. Words meaning

1. wounded -- severely injured
2. faithful --- loyal
3. beds – small patches of ground for plants
4. pity – feel sorry for
5. pardon ---forgive
6. hermit ---- wise man

II. Fill in the blanks using appropriate forms of the words given in brackets.

1. The--------said that only fresh evidence would make him change his---------- (judge)
2. I didn't notice any serious----------opinion among debaters although they ------from one another in small points.(differ)
3. It isn't always ----------that ----------is the mother of invention.(necessary)
4. Hermits are ----------men but how they acquire ---------- can't be told.(wise)
5. The committee ----------to make him the leader, the----------is likely to please all. (decide)
6. Asking for ----------is as noble as willingness to----------(forgive)

Solution:-

1. Judge, judgement
2. different, differ
3. necessary, necessity
4. wise, wisdom
5. decided, decision
6. forgiveness, forgive

III. Make sentences with vocabulary ex-I words

IV. Working with the text passage:-

Q1. Why was the king advised to go to the magicians?

An – The king was advised to go to the magicians because some people believed that in order to decide right time to do something one should go to the magicians to know the future.

Q2. In answering the second question whose advice did the people say would be important for the king?

An—The people said the advice of the councillors, priests, doctors or soldiers would be important.

Q3. Why were the messengers sent throughout the kingdom?

An- The messengers were sent to announce a reward for those who could answer the king's three questions.

Q4. Did the wise men win the reward? If not why?

An—No the wise men didn't win the reward because their answers were different from each other and the king was dissatisfied with their answers.

Q5. How did the king and the hermit help the wounded man?

An- The king and the hermit washed the wound, covered the wound with the handkerchief and kept on dressing it until the bleeding stopped.

Q6. Who was the bearded man? Why did he ask for the king's forgiveness?

An- The man was the king's enemy .He wanted to take revenge of his brother's death by killing the king and taking his property. He asked for forgiveness as he had wanted to kill the king who had saved his life now. He was grateful for the king's act.

Writing skill based on the lesson:-

I. Imagine you are the hermit digging in your garden. A man in ordinary clothes came to meet you. You understood he was the king.

Write the above incident in your own words(75-100 words)tay

Activity:-

Express your views based on the self-realisation or understanding of the story in about 75 words .Also mention how far the answers for the three questions are agreeable to you.(Do you agree with these answers?)

Note:-Attempt all this work in any old copy or pages which should be kept for checking.

Stay Home, Stay Fit

CLASS – VII

COMPUTERS

ASSIGNMENT-1

PT-2

Instructions:-

- **This is the assignment for the students of class-7, based on chapter-1, "Introduction to**
- **Computers".**
- **Students are suggested to go through the chapter enclosed in the form of PDF and do the back exercise.**
- **Students can use a separate notebook (Computers revision notebook) for the given assignment.**
- **Solved computers worksheet (based on PT-2 syllabus) will be provided later.**

Introduction to computers

Computer System

A computer is a machine that works according to a list of instructions known as program. It is an electronic machine that helps you to process data. It is used to solve problems related to almost every field such as education, home, medicine, science and research animation and publishing.

A computer system has two main parts which together make it work.

- Hardware
- Software

Hardware

These are the physical units of a computer system which you can see and touch. These units constitute the hardware of a computer system.

A computer hardware has following units:

*Input devices *Output devices *Processing devices *Storage devices

Input Devices

Input devices enable you to enter (or input) data into a computer. You already know about the two most commonly used input devices: keyboard and mouse.

Some other input devices are:

Scanner: Is input device scans images from photographs posters, magazines directly into the computer. Some commonly used scanners are

Flatbed Scanner : It has a flat surface made of glass, where the item to be scanned is placed. It works like a photocopy machine.

Handheld Scanner: This scanner is used by dragging it over the object that is to be Scanned.

It is most commonly used in shopping stores.

MICR (Magnetic Ink Character Recognition): This input device is used to read and identify magnetized characters printed on a document such as a cheque.

Digital Camera : This input device is used to take photographs. The photographs from the camera can be transferred to the computer with the help of a data cable. Digital cameras hold a memory card that stores the photographs. The memory card can be taken out of the camera and the photos can also be put into the computer using a card reader.

Drawing Tablet : This input device is a board which has a special pen to write on it and connected to the computer. The word or image you draw on this device can be saved in the computer.

Touch Screen: A touchscreen is a screen that you can touch with your finger to input information. Examples of touchscreen devices are Tablet, touchscreen monitor, cell phones and ATM.

Web Camera: A web camera (or webcam) is a video camera connected to a computer, that gathers a series of images which can be accessed using the Internet. Webcam technology is widely used in fields such as video conferencing and instant messaging.

Output Devices :

Output devices enable the computer to show you the desired result and information. You already know about the most commonly used output devices: monitor, speakers and printers.

Let Us know more about printers.

There are mainly three types of printers:

Dot Matrix Printer This printer contains movable print head with pins that strike the ribbon placing a dot on the paper with hundreds of dots forming images or text. These printers are less expensive but are very noisy. The speed of this printer is given in cps (characters per second)

Inkjet Printer: This printer forms letters and images on the paper by spraying small streams of quick-drying ink. The speed of this printer is given in lpm (lines per minute).

Laser Printer: This printer uses laser technology to print images on the paper. This gives the best quality output and are the most expensive. The speed of this printer is given in ppm (pages per minute).

Some other output devices are:

Plotter: This output device is used for making large paper drawings such as construction maps or engineering drawings. Plotters are divided into three types

- **Drum Plotter: This plotter consists of a drum or roller on which a paper is placed and the drum rotates back and forth to produce the graph on the paper. Drum plotters are used to produce continuous output, such as plotting earthquake activity.**

- **Flatbed Plotter: This plotter plots on a paper that is spread and fixed over a rectangular flatbed table. It is used in the design of cars, ships aircrafts, buildings and highways.**
- **Inkjet Plotter: This plotter creates an image by spraying small droplets or ink on the paper. It is used in designing banners, billboards and road signs.**

LCD Projector: This output device is used to display videos, images or computer data on a larger screen. It projects an image onto the surface by passing light over an LCD panel. It is Used while giving presentations.

Processing Device :

The Central Processing Unit or CPU is the processing device of a computer. It is called the brain of the computer. It makes all the required calculations and processes data into Information. It controls all the input and output devices. The CPU consists of three units : ALU, CU and MU.

ALU or Arithmetic Logical Unit: It performs all the arithmetic computations and logical operations. It performs the mathematical calculations involving addition, subtraction, division, multiplication, logical as well as relational operations such as AND, OR, greater than, less than etc.

CU or Control Unit : It controls and co-ordinates the activities of all the other units of a computer system. It controls all the INPUT operations of the computer. It decodes Instructions, determines the storage of instructions and data. It takes data to the ALU, and from the ALU to the memory and then to the output unit.

MU or Memory Unit : It is an important part of the computer system Memory unit receives data, holds it and then delivers it according to the instructions from the Control Unit.

Storage Devices:

Storage devices enable you to store data and information in them. The storage device of a computer system is known as computer memory.

There are two types of computer memory: primary memory and secondary memory.

Primary Memory : It is often called the working memory or the main memory of a computer system. RAM and ROM are two major types of primary memory.

- **RAM (Random Access Memory) : It is capable of sending and receiving data at a very high speed. It is temporary in nature i.e. data stored in primary memory is lost when the computer is switched off. So, it is also called the volatile memory.**

- **ROM (Read Only Memory): It holds instructions put by the manufacturer to operate the computer. It is a permanent memory.**

Secondary Memory : It is used to store data for a long time. It operates at a slower rate than primary memory. Secondary memory is permanent in nature, i.e. data stored in secondary memory are not lost when the computer is switched off. So, it is also call the non-volatile memory. It is cheaper than primary memory. Examples of secondary memory are hard disk, compact disk and pen drive.

Accessing Computer Memory :

Primary memory can be directly accessed by the CPU but Secondary memory cannot be accessed directly. Data from the secondary memory is first transferred to the primary memory and then to the CPU.

SOFTWARE :

Software relates to set of programs that controls the computer hardware parts and makes them operational. In other words, it governs the operations of a computer system. Software is classified into two broad categories: System software and application software.

System Software : It perform the basic functions that are necessary to operate a computer system. It controls the various resources of a computer system. The operating system (OS) is an example of system software. The various editions of Windows are the most commonly used operating system.

Application Software :

It consists of programs that are designed to do specific tasks such as payroll, inventory, word processing, graphics, spreadsheets and desktop publishing.

RELATIONSHIP BETWEEN HARDWARE AND SOFTWARE:

The hardware and software together make a computer system. Both are essential components of a computer system. Hardware is the physical component of a computer system, and software are the instructions or commands that make the hardware components operational. The software is the driving force of a computer. You may use any software and use the hardware.

For example, you make a picture in Paint and give the Print command to get a printout. Here, Paint is the application software which helps to create the picture and give the print command. The operating system is the system software which Instructs the hardware, printer to print the picture.

DATA HIERARCHY :-

You know that data refer to raw facts and figures that may consist of alphabets numbers, sound pictures and images. A computer system processes data and gives Information that is used for various purposes. The data is stored in the form of bits and bytes in a computer database

- **Bit** : A bit is the short form of binary digit. A computer system represents data using the digits 0 and 1. These digits show whether the computer circuits are OFF or ON. A bit is therefore represented by an electronic circuit that is either OFF or ON

- **Byte** : A byte is the collection of 8 bits. A byte of information is stored by using several bits in a predefined combination called bit patterns. Two such bit patterns are ASCII and EBCDIC.
- **Field** : A field is a collection of bytes that contain information about an item. For example, the name of a student, his/her age and his/her class.

- **Record** : A record is a collection of inter-related fields. For example, a student's record may contain fields such as name, age, class and subjects.
- **File** : A file is a collection of related records. For example, a collection of all the records of all the students in your class is class file.
- **Database** : A database is a collection of all the files in an organisation. For example, files of students, teachers and other staff members of your school make the school database.

TROUBLESHOOTING TIPS :

You are familiar with the computer system, its various parts and their working. You know that a computer system normally runs well and performs all required functions for you. But there are times when some parts of the computer do not work well or, at times, do not work at all.

Sometimes, the display is not proper, at other times the speakers or mouse are not working. Though fixing computer problems is the job of specially trained people, there are

some problems that you too can fix. Detecting the problem in a computer system when it is not working properly is called Troubleshooting. Let us discuss some Troubleshooting tips for common computer problems.

- Computer is not turning ON
  - Check to see the power cord is properly attached or not. There are three connections that carry power supply
    1. From mains to the UPS
    2. From the UPS to the CPU.
    3. From the CPU to the monitor
  - Check all these connections one by one. If the supply plugs are loose, electricity may not flow to the system
  - Make sure that the monitor switch is ON,

- Mouse is not working
  - Check the mouse whether it is properly attached to its part of the CPU or not.

- No sound
  - Check to make sure that the speaker's cord is attached to the CPU box
  - Make sure that the power supply to speakers is proper and the speakers are ON.

- Keyboard is not working
  - Check if the cables are correctly connected. Connect it again to check for any loose connection
  - Check if it has got stuck

- Keyboard is typing only capital letters
  - Check if the Shift key has got stuck due to hitting hard.

- Computer is not responding

Suppose that you are working on your computer and your system suddenly stops responding to your commands. We say that your computer is hung. In this condition your mouse or keyboard might not respond.

- Close the applications if possible
- Press Ctrl + Alt + Del key combination. You See a screen with many options. Choose Start Task Manager. The Windows Task Manager opens. It shows all the applications currently running.
- If there is any problem with some application you see the status with the message Not Responding after its name. Click and select the application.
- Now click on the End Task button to terminate the problem. If the problem is still there, restart your computer.

Assignment-1

Answer the following:-

Q.1 Which memory is not directly accessible by CPU?

Q.2 How many bits make one byte?

Q.3 Name the types of scanner.

Q.4 Define field and record.

Q.5 What is Data hierarchy?

Q.6 What is a bit?

Q.7 Differentiate between Application software and System software.

Q.8 Explain computer memory and its types.

Q.9 What do you do when your computer is hung?

Q.10 Explain the types of printer.

Fill in the blanks:-

1. **A computer has two main parts, _____ and _____.**
2. **A _____is a collection of all the files in an organisation.**
3. **_____ keys open Task Manager window.**
4. **Detecting the problem in a computer system when it is not working properly is called _____.**
5. **A computer represents data using digits _____.**
6. **A file is a collection of related _____.**
7. **Software are a set of _____.**
8. **RAM is an example of _____ .**
9. **The full form of ALU is _____.**
10. **The storage device of a computer system is referred to _____.**

Class – VII

PHYSICS

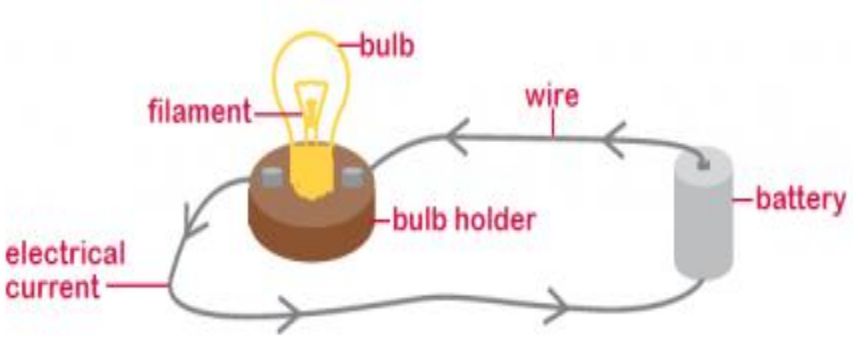
Electric Current and its Effects

You have studied about electricity in class VI. Let us recall a few points from our previous knowledge. These points will help in understanding the further information about electricity given in this chapter.

- Electricity is a form of energy, which is used to do different types of work in our life.
- Electric cell is a source of electrical energy, wherein the chemical energy generates the electrical energy.
- Sometimes two or more cells are combined together to provide more electric current.
- The combination of two more cell is known as a **battery.**
- An electric bulb is a device which glows to give light.
- The glowing part of the bulb is called a **Filament**. If the filament of a bulb breaks for any reason, the bulb does not glow and is said to be fused
- A **circuit** is a closed path for the current to flow through a device in order to make it work.
- A switch is a device which help in breaking or completing a circuit.
- Material which allow the electric current to flow through them are called Conductors or good conductors of electricity, e.g. silver, aluminium, copper, etc.
- Materials like dry wood, paper, plastic, bakelite, etc. which do not allow electric current to flow through them are called Insulators or poor conductors of electricity.

Most of the commonly used circuits have a large number of components. Drawing all the components with their true pictures is a tedious and a time consuming job. So electric components and devices are represented by symbols in a circuit diagram.

Circuit Diagram with electrical components.

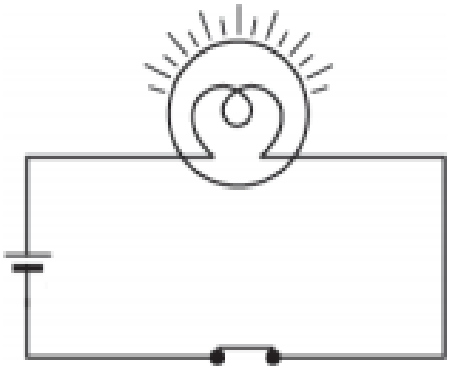


Some common electrical components and their symbol

Table 14.1 Symbols for some electric circuit components

S.No.	Electric component	Symbol
1.	Electric cell 	
2.	Electric bulb 	
3.	Switch in 'ON' position 	
4.	Switch in 'OFF" position 	
5.	Battery 	
6.	Wire 	

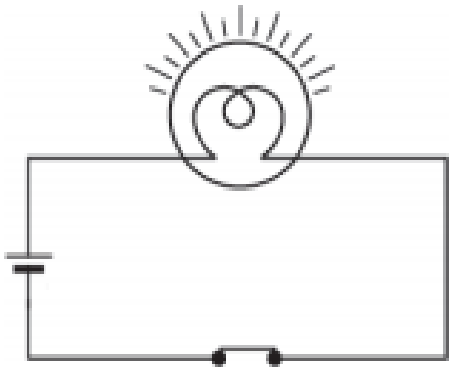
Circuit diagram of electric circuit with symbols.



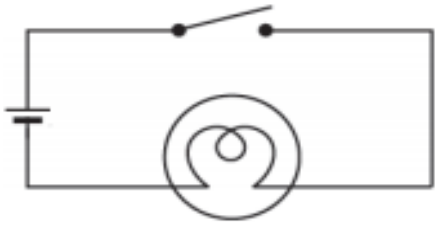
An open circuit and closed circuit

Open Circuit	Closed Circuit
• The switch is in the off position.	• The switch is in the on position.
• No current flows through the circuit.	• Current flows through the circuit.
• Bulb does not glow.	• Bulb glows.

- *Closed Circuit*

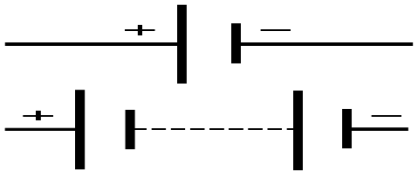


- *Open Circuit*



How can we connect cell to prepare batteries

- Place the cells properly such that the positive terminal of one cell is connected to the negative terminal of the next cell
- The symbol used for representing a cell and a battery



- The longer line represent positive terminal and the shorter line represents negative terminal.

Heating Effect of Current

You might have seen an electrician or elders at home removing the bulb from its holder by holding it with a handkerchief. Why is it so? This is because the bulb is hot. How it get heated up?

When the current flows through the circuit the filament of the bulb get heated up and begins to glow, the longer the bulb glows, the heater it becomes . So we can conclude that

- Current produces a heating effect
- Heating caused is more if the current flows for more time
- **When current is passed through a wire or component or device it becomes hot. This is known as heating effect of current**.
- Different materials get heated to different extent on passage of current through them.
- Silver and copper becomes least hot, whereas material like tungsten and nichrome get too hot on the passage of current through them.
- The filament of an electric bulb is made of tungsten, while the filament of electric iron , electric kettle etc. are made of nichrome.
- Tungsten and nichrome have the ability to withstand very high temperatures, without getting melted.
- **The coil of wire used in heating devices is called an element.**
- The amount of heat produced in a wire depends on:
- (1) Material of the wire
- (2) Length of the wire
- (3) Thickness of the wire

Answer the following Questions(Note down the answers in any available copy).

Q1. Draw a simple to represent

(a) A battery with two cell.

(b) An open switch.

(c) A closed switch.

Q2. Draw a circuit diagram of a cell connected to a bulb through a closed key. Mark the negative and positive terminal of the cell.

Q3. Write short note on:

(a) A battery

(b) A circuit

Q4. Differentiate between

(a) Good conductors and Insulators.

(b) Open circuit and Closed circuit.

Q5. What do you mean by heating effect of current?

Q6. Name few devices based on heating effect of current.

Q7. Why tungsten is used as filament in electric bulb?

Q8. What are the factors on which heating effect of current depends on?

Q9. What is a switch? **(Note: Answers will be uploaded be within 3-4 days)**

Class Vii CHEMISTRY

Lesson : ACIDS, BASES AND SALTS (Continuation)

NEUTRALISATION :- Acids and bases are chemically opposite substances. So, when an acid is mixed with a base, they neutralise (or cancel) the effect of each other. When an acid solution and a base solution are mixed in suitable amounts, both the acidic nature of the acid and the basic nature of the base are destroyed. The resulting solution is neither acidic nor basic. So, the reaction between an acid and base is known as neutralisation. In the process of neutralisation, salt and water are produced with the evolution of heat.

Salt produced in the reaction may be acidic, basic or neutral in nature. The evolved heat raises the temperature of the reaction mixture.

Acids + Base ---> Salt + water (heat is evolved)

Eg. Hydrochloric acid(Acid) + Sodium hydroxide (Base) --> Sodium chloride(salt) + Water

HCl + NaOH --> NaCl + H2O

We are going to use an indicator called phenolphthalein.

Note: Phenolphthalein is an indicator used in the neutralisation process. When the solution is basic, phenolphthalein gives a pink colour but if the solution is acidic, it remains colourless.

Neutralisation in everyday Life

The neutralisation reactions involving acids and bases play a very important role in our everyday life. The treatment of an ant's sting. Remedy for indigestion, soil treatment and the treatment of factory wastes, all involve neutralisation reaction.

1. **Indigestion:-** Our stomach produces hydrochloric acid. This hydrochloric acid helps in digesting our food. Sometimes, excess of hydrochloric acid is produced in the stomach which causes indigestion. Due to indigestion, sometimes a person feels pain in the stomach and irritation. To relieve indigestion, we take an antacid such as milk of magnesia. Milk of magnesia contains a base called magnesium hydroxide. Magnesium hydroxide neutralise the excess acid present in the stomach and cures indigestion. Another antacid is baking soda which contains a base sodium hydroxide carbonate.

2. **Ant bite:-** When an ant bite, it injects an acidic liquid into the skin of the person which causes burning pain. The sting of an ant contains an acid called formic acid. The effect of the acid can be neutralised by rubbing a mild base like baking soda solution (sodium hydrogen carbonate) or calamine solution. Calamine solution contains a base called Zinc carbonate. Thus, being a base, baking soda solution or calamine solution neutralises the acidic liquid injected by the ant and cancels its effect.
3. **Soil treatment:-** The soil may be acidic or basic naturally. The plants do not grow well, if the soil at a place is too acidic or too basic. Excessive use of chemical fertilisers makes the soil acidic. When the soil is too acidic, it is treated with bases like quicklime (Calcium oxide)

or slaked lime (calcium hydroxide). These bases neutralise the excess acid present in the soil and reduce its acidic nature. If the soil is basic, organic matter releases acids which neutralise the excess bases in the soil and reduce its basic nature.

4. **Factory waste:-** The waste substances discharged by many factories contain acids. If these factory wastes are allowed to flow into the water bodies (like rivers, ponds etc.), then the acid present in them will kill fish and other organisms which live in the water bodies. The factory wastes are therefore neutralised by adding basic substances before discharging them into water bodies.

ASSIGNMENT- 2

1. While playing in a park, a child was stung by a wasp. Some people suggested applying the paste of baking soda while others suggested of lemon juice as remedy. Which remedy do you think is appropriate and why?

2. Match the following:

a. Tartaric acid	1. Soap
b. Calcium hydroxide	2. Curd
c. Formic acid	3. Unripe mango
d. Lactic acid	4. Ant sting
e. Sodium hydroxide	5. Lime water

3. Fill in the blanks:-

    1. Bases are _____in nature.
    2. The chemical name of common salt is _____
    3. When you use blue litmus paper as an indicator, it gives the colour _____
    4. _____ acid is found in orange.
    5. Acids react with _____ to form salt and water. This process is called _____ reaction.

4. Who am I?
    1. I am an organic acid present in lemon.
    2. I am a salt used by your mother when she makes cookies and cakes for you.
    3. I am a neutral substance you drink every day.
    4. Doctor recommends to your brother when he overeat and suffer from indigestion.
    5. I am present in the sting of an ant.

5. Choose the correct answer:-

    1. When soil become too basic, plants fo not grow well in in. To improve its quality, what

        What must be added to the soil

        a. Organic matter

b. Quick lime
c. Slaked lime
d. Calamine solution

2. Phenolphthalein is a synthetic indicator. Its colour in the acidic and basic solutions, respectively are ;-

a. Red and blue
b. Blue and red
c. Pink and colourless
d. Colourless and pink.

3. Turmeric is a natural indicator. On adding paste to acid and base separately, which colours would be observed

a. Yellow in both acid and base
b. Yellow in acid and red in base.
c. Pink in acid and red in base.
d. Red in acid and blue in base.

4. Litmus is a natural dye is an extract of which of the following
a. China rose
b. Beet root
c. Lichen
d. Blue berry

Q.6. Classify the following substances into acidic and basic substances

Tomato juice, soap solution, toothpaste, lemon juice, vinegar, window cleaner

Q.7. Complete the following table;-

S.No.	Test solution	Effect on red litmus paper	Effect on blue litmus paper
1.	Tap water		
2.	Detergent solution		
3.	Vinegar		
4.	Aerated drinks		
5.	Baking soda solution		
6.	Milk of magnesia		
7.	Lemon juice		

ANSWERS TO THE PRACTICE QUESTIONS

Ans. (1) Acidus/acere

Ans. 2. Formic acid

Ans. 3. Curd

Ans.4. Turmeric is a natural indicator it change its yellow colour into red in base. A base named sodium hydroxide or Potassium hydroxide is present in soap. So the turmeric stain on clothes turns red when washes with soap.

Ans 6. Sodium hydroxide or Potassium hydroxide

Ans.7 An indicator is a substance which when added to a solution indicates whether the solution is acidic or basic by changing its colour.

Ans.8. The other name of vitamin C is Ascorbic acid. Citrus fruits(lemon, orange etc.) are its richest sources

Ans. 9. Turmeric, Litmus and China rose are categorized as natural indicators.

Ans. 10. Tamarind, grapes, unripe mango

Ans, 11.The rain containing excess of acids called an acid rain, The rain becomes acidic because carbon dioxide c, sulphur dioxide and nitrogen dioxide dissolve in rain drops to form carbonic acid,

Sulphuric acid and nitric acid respectively. It can cause damage to buildings, historic monuments, plants and animals.

Answer to the Assignment -1

Ans. I

1. Irreversible change
2. Reversible change
3. Irreversible change
4. Irreversible change
5. Reversible change
6. Reversible change
7. Irreversible change
8. Reversible change
9. Reversible change
10. Reversible change
11. Irreversible change
12. Irreversible change

Ans 2. Desirable changes

1. Cooking food.
2. Covering the copy
3. Preparing tea

4. Opening the door
5. Drinking water when we are thirsty

Undesirable changes

1. Burning of a house
2. Forest fire
3. Destruction by earth quake
4. Death caused by Covid – 19
5. Decaying of vegetable

Ans. 3

Physical change	Chemical changes
1)It is temporary change	It is permanent change
2)It is reversible change	It is irreversible change
3)No new substances are formed	New substances are formed
4) Physical properties are changed	Chemical properties are changed

Multiplication of integers

Rule1:If we multiply any two positive integers,the product will be positive.

Eg:3x5=15

Rule2:If we multiply any two negative integers,we multiply them as whole numbers and put the positive sign before the product.

Eg: (-2)x(-3)=6

Rule3:If we multiply a positive integer with a negative integer or if we multiply a negative integer with a positive integer,the product will be negative.

Eg.5x(-4)= -20

-10x3= -30

Multiplication Rule

(+) x (+)= +
(-) x (-) = +
(-) x (+) = -
(+) x (-) = -

Product of 3 or more negative integers

Eg.a) (-2)x(-3)=6 [the product of 2 negative integers is a positive integer.]

b) (-2)x(-3)x(-4)=6x(-4)= -24 [the product of 3 negative integers is a negative integer.]

c) (-1)x(-3)x(-4)x(-5)=(-12)x(-5)=60 [product of 4 negative integers is a positive integer]

d) (-1)x(-2)x(-3)x(-4)x(-5)=24x(-5)= -120 [product of 5 negative integers is a negative integer]

From this,we find that if the number of negative integers in a product is even,then the product is a positive integer; if the number of negative integers in a product is odd,then the product is a negative integer.

Properties of multiplication of integers

1. Closure property of multiplication

The product of two integers is again an integer,that is axb is an integer,for all integers a and b.

Eg.3x(-4)=12 ,an integer

(-6)x(-5)=30 , an integer

2.Commutative property of multiplication

For any two integers *a* and *b*

axb=bxa

eg.3x(-4)= -12

(-4)x3= -12

⇒ 3x(-4)=(-4)x3

3.Associative property of multiplication

For any three integers *a ,b* and *c*

(axb)xc=ax(bxc)

4.Multiplication by zero

For any integer *a* ,

ax0=0xa=0

5.Multiplicative identity

For any integer *a*

ax1=1xa=a

- 1 is called the multiplicative identity for integers.

6.Distributive property of multiplication

For any integers *a ,b* and *c*

ax(b+c)= (axb)+(axc)

ax(b-c)=(axb)-(axc)

eg. 1) 3x(-2+5)=(3x-2)+(3x5)

verification

L.H.S=3x(-2+5)=3x3=9

R.H.S=(3x-2)+(3x5)

=(-6)+15=9

⇒L.H.S=R.H.S (So verified)

Eg.2) 5x(10-2)=(5x10)-(5x2)

Verification

LHS=5x(10-2)=5x8=40

RHS=(5X10)-(5X2)

=50-10=40

⇒LHS=RHS (So verified)

N0TE:To do multiplication easier,we can make use distributive property.

Eg.1) 25x99

25x99=25x(100-1)

=25x100-25x1

=2500-25

=2475

Eg.2) 31x51

31x51=31x(50+1)

=31x50+31x1

=1550+31=1581

Etc.....

St. Gregorios School, Dwarka

Class -VII (2020-21)

Mathematics

Worksheet

Q1:- Find the sum:

(i) (-102) + (-56) +31

(ii) 67 + (-76) + (-34)

(iii) 112 + (-42) + (-16)

(iv) 312 + (-99) + 56

Q2:- Subtract:

(i) (-72) from 12

(ii) 62 from -34

(iii) 22 from 0

(iv) -56 from 32

Q3:- In Srinagar , the temperatures for six days were -12°C , -8°C , -3°C , 6°C , -15°C and 1°C . Represent the temperatures on a number line.

(i) What was the lowest temperature reached?

(ii) On how many days was the temperature below 0°C ?

Q4:- Use the sign of > , < or = in the blank:

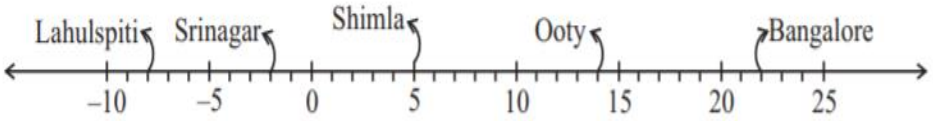
1. (-8) + (-4) ____ (-8) – (-4)
2. 23 + 11 -41 ____ 23 -41 -11
3. 39 + (-24) -15 ____ 36 + (-52) - (-36)
4. (-3) + 7 - (19) ____ 15 -8 + (-9)

Q5:- Write true or false:

1. -15 is greater than -6.
2. 0 is neither negative nor positive.
3. -1 , -3 , -5 , -7 , -9 are in ascending order.
4. The sum of a positive integer and a negative integer is always a positive integer.

EXERCISE 1.1

1. Following number line shows the temperature in degree celsius (°C) at different places on a particular day.



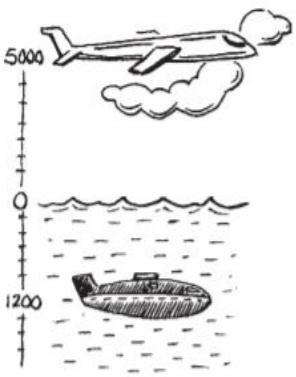
(a) Observe this number line and write the temperature of the places marked on it.

(b) What is the temperature difference between the hottest and the coldest places among the above?

(c) What is the temperature difference between Lahulspiti and Srinagar?

(d) Can we say temperature of Srinagar and Shimla taken together is less than the temperature at Shimla? Is it also less than the temperature at Srinagar?

2. In a quiz, positive marks are given for correct answers and negative marks are given for incorrect answers. If Jack's scores in five successive rounds were 25, –5, –10, 15 and 10, what was his total at the end?



3. At Srinagar temperature was – 5°C on Monday and then it dropped by 2°C on Tuesday. What was the temperature of Srinagar on Tuesday? On Wednesday, it rose by 4°C. What was the temperature on this day?

4. A plane is flying at the height of 5000 m above the sea level. At a particular point, it is exactly above a submarine floating 1200 m below the sea level. What is the vertical distance between them?

5. Mohan deposits Rs 2,000 in his bank account and withdraws Rs 1,642 from it, the next day. If withdrawal of amount from the account is represented by a negative integer, then how will you represent the amount deposited? Find the balance in Mohan's account after the withdrawal.

6. Rita goes 20 km towards east from a point A to the point B. From B, she moves 30 km towards west along the same road. If the distance towards east is represented by a positive integer then, how will you represent the distance travelled towards west? By which integer will you represent her final position from A?

7. In a magic square each row, column and diagonal have the same sum. Check which of the following is a magic square.

5	–1	– 4
–5	–2	7
0	3	–3

(i)

1	–10	0
– 4	–3	–2
– 6	4	–7

(ii)

8. Verify $a-(-b)=a+b$ for the following values of a and b.

(i) $a = 21, b = 18$ (ii) $a = 118$, b = 125

(iii) $a = 75, b = 84$ (iv) $a = 28, b = 11$

9. Use the sign of >, < or = in the box to make the statements true.

(a) $(-8)+(-4)$ ☐ $(-8)-(-4)$

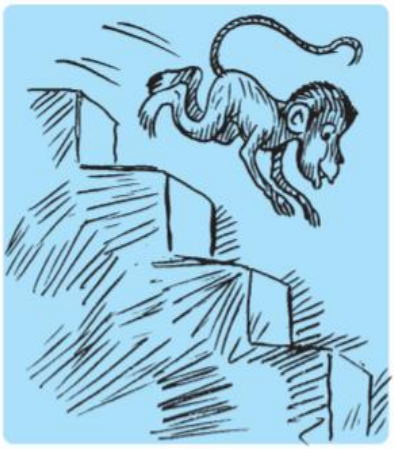
(b) $(-3)+7-(19)$ ☐ $15-8+(-9)$

(c) $23-41+11$ ☐ $23-41-11$

(d) $39+(-24)-(15)$ ☐ $36+(-52)-(-36)$

(e) $-231+79+51$ ☐ $-399+159+81$

10. A water tank has steps inside it. A monkey is sitting on the topmost step (i.e., the first step). The water level is at the ninth step.



(i) He jumps 3 steps down and then jumps back 2 steps up. In how many jumps will he reach the water level?

(ii) After drinking water, he wants to go back. For this, he jumps 4 steps up and then jumps back 2 steps down in every move. In how many jumps will he reach back the top step?

(iii) If the number of steps moved down is represented by negative integers and the number of steps moved up by positive integers, represent his moves in part (i) and (ii) by completing the following; (a) $-3+2-\ldots=-8$ (b) $4-2+\ldots=8$. In (a) the sum (– 8) represents going down by eight steps. So, what will the sum 8 in (b) represent?

Exercise 1.2

1. Write down a pair of integers whose:

(a) sum is –7 (b) difference is –10 (c) sum is 0

2. (a) Write a pair of negative integers whose difference gives 8.

(b) Write a negative integer and a positive integer whose sum is –5.

(c) Write a negative integer and a positive integer whose difference is –3.

3. In a quiz, team A scored – 40, 10, 0 and team B scored 10, 0, – 40 in three successive rounds. Which team scored more? Can we say that we can add integers in any order?

4. Fill in the blanks to make the following statements true:

(i) $(-5)+(\ldots\ldots)=(-8)+(\ldots\ldots)$

(ii) $-53+\ldots\ldots=-53$

(iii) $17+\ldots\ldots=0$

(iv) $[13+(-12)]+(\ldots\ldots)=\ldots\ldots+[(-12)+(-7)]$

(v) $(-4)+[\ldots\ldots+(-3)]=[\ldots\ldots+15]+\ldots\ldots$

CLASS - VII , chapter 1 - INTEGERS

Ex 1.1 (Solution).

a) Ans. in the book.

1. b) Difference between hottest and coldest place
$= 22-(-8) = 22+8 = 30^\circ C$

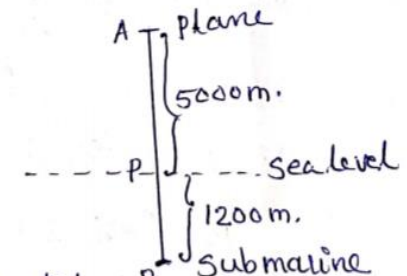
c) Temperature difference between Lahulspiti and Srinagar
$= -2-(-8) = -2+8 = 6^\circ C$

d) Yes. Temperature of Srinagar and Shimla taken togethes
$= -2+5 = 3^\circ C$ is less than shimla.
But it is not less than temperature of Srinagar (-2).

2. Jack's total score at the end of five rounds
$= 25+(-5)+(-10)+15+10$
$= 25+15+10+(-5)+(-10)$
$= 50+(-15) = 50-15 = 35$

3. Temperature of Srinagar on Tuesday $= -5-2 = -7^\circ C$
Temperature on Wednesday $= -7+4 = -3^\circ C$

4. The vertical distance between the plane and the submarine = AP+PB
$= 5000+1200 = 6200m$



5. Amount deposited can be represented by positive integers.
Balance in Mohan's Account $= 2000-1642$
$= ₹\ 358.$

6. The distance travelled towards the west can be represented by negative integer.
The final position of A $= 20+(-30) = -10$ km

7. H.W.

8. Verify $a-(-b)=a+b$ for the following values of a and b.

i) $a=21,\ b=18$

LHS $a-(-b)=21-(-18)=21+18=39$

RHS $a+b=21+18=39$

$\Rightarrow a-(-b)=a+b$

ii) iii) and iv) H.W.

9. a) $(-8)+(-4)$ ☐ $(-8)-(-4)$

-12 ☐ $-8+4$

-12 ☑ -4

b) $(-3)+7-(9)$ ☐ $15-8+(-9)$

$4-19$ ☐ $7+(-9)$

-15 ☑ -2

c, d, e H.W.

10. will be discussed in the class.

Ex 1.2

1. a) $(-5,-2)$ $[-5+(-2)=-7]$

b) $(-8,2)$ $[-8-2=-10]$

c) $(-5,5)$ $[-5+5=0]$

2. a) $(-2,-10)$ $[-2-(-10)=-2+10=8]$

b) $(-8,3)$ $[-8+3=-5]$

c) $(-1,2)$ $[-1-2=-3]$

3. Team A score $=-40+10+0=-30$

Team B score $=10+0+(-40)=-30$

∴ We can add integers in any order.

Class – VII

HISTORY L-1

TRACING CHANGES THROUGH A THOUSAND YEARS

NEW WORDS:

1. CARTOGRAPHER : A man who makes maps.
2. CARTOGRAPHY : Art of making maps.
3. HISTORIAN : A person who studies the past using literary and archaeological sources.
4. INSCRIPTION: Writings on hard surface .These are engraved on rocks ,pillars, roof and stone tablets.
5. ARCHIVES: A place where documents and manuscripts are stored.
6. SCRIBES: People who copy documents.
7. MANUSCRIPTS: Old writings on soft surface like the bark of branch ,tree ,paper these are stored in libraries.
8. CHRONICLES : A record of historical events.
9. RAJPUTS: A group of warriors who claimed Kshatriyas as caste and status .
10. BARDS: Literary poets .
11. HABITAT: The natural home or environment of an animal, plant, or other organism.
12. PATRON: An influential wealthy individual who supports another person ,an artist ,a craftsman , a learned man , a noble. etc
13. JATI: Sub-caste.
14. BHAKTI: A direct relation between the deity and the devotee without the aid of priests rituals and sacrifices.
15. ULEMA: Learned theologians and jurists.

16. MODERNITY: It is a sense of material advancement and intellectual progress.

LESSON -2

NEW KINGS AND KINGDOMS

NEW WORDS:

a. SAMANTHAS : Military officers who provided the kings with military support whenever needed .They offered gifts for their king and presents in their courts.
b. DYNASTY : A family whose members become kings one after the other.
c. PRE – HISTORIC PERIOD: The time for which there are no printed or written information available. It is available only in the form of tools, weapons, coins, pottery, jewellery etc.
d. HISTORIC PERIOD: The time for which there are written records available such as books, manuscripts. etc
e. PRASHASTIS: Long poems written in praise of a king .These were composed by learned Brahmins who often helped the king in his administration.
f. BRAHMADEYA: Gift of land given to Brahmins by the kings .These were recorded on copper plates which were given to those who received the land.
g. SOURCES: All kinds of materials that help us know the past .Source are of two types literary and archeological.
h. SULTAN : Ruler or king in Arabic.
i. KHALIFA :Leader of muslims all over the world, in Turkey

j. UR : Settlements of peasants who become prosperous with the spread of irrigation and agriculture.
k. NADU:Group of villages that perform several function, gave justice and collected taxes etc . with the help of village council.
l. SABHA: Assembly of prominent Brahmins landowners .
m. NAGARAMS: These are associations of traders who occasionally perform administrative functions.

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Class – VII

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Class 7 (biology)

1. Nutrition in plants (Assignment-1)

Multiple choice question:

1. In the process of photosynthesis, which of the following energy conversions occur?
   a) Solar energy is changed into chemical energy.
   b) Solar energy is changed into mechanicalenergy.
   c) Chemical energy is changed into light energy

2. Pitcher plant traps insects because it
   a) Is a heterotroph
   b) Grows in soils which lack in nitrogen.
   c) Does not have chlorophyll.

3. Insectivorous plant among the following is
   a) Lichen
   b) Cuscuta
   c) Pitcher plant

4. If iodine is dropped on the boled leafit gives blue-black colour due to the process of
   a) Starch
   b) Protein
   c) Fat

5. In the plant of cactus leaves are modified into
   a) Branches
   b) Spines
   c) Leaf vein

Fill in the blanks

i) We obtain nutrients through_____.
ii) The components essential for our body is called _____.
iii) All animals are directly or indirectly _____ on plants for food.
iv) ____ can make their own food from simple nutrients.
v) In photosynthesis solar energy is captured by the pigment called____.

Name the following

a) A parasitic plant with yellow, slender and tubular stem.
b) One plant that trap and feeds on insects.
c) A plant that has both autotrophic and heterotrophic mode of nutrition.

Answer the following

1. Why photosynthesis is named so?
2. What is heterotrophic nutrition?
3. What is the function of stomata in the leaf of a plant?
4. What is the role of leguminous plant in replenishing soil fertility?
5. Explain how pitcher plant gets their nutrition?

Class 7 (biology)
1. Nutrition in plants (Assignment-2)

Match the columns

Column I	Column II
a) Saprotroph	i) Pitcher plant
b) Chlorophyll	ii) Food factory of plant
c) Bacteria Rhizobium	iii) Green plant leaf
d) Cuscuta	iv) fungi
e) insects	v) nitrogen fixing
f) mango tree	vi) stomata
g) leaf	vii) parasite
h) tiny pores present on leaf	viii) raw material
i) Co2 and water	ix) saprophyte
j) mushroom	x) autotroph

Answer the following

1. What is the function of guard cells of stomata?
2. Plant prepare their food using a different mode of nutrition than us? What is it?
3. Algae is green in colour. Why?
4. What do you mean by saprotrophic mode of nutrition?
5. Potato and ginger are both underground parts that store food. Where is the food prepared in these plants?

Fill in the blanks of the paragraph given below with the words provided in the box.

chlorophyll, energy, food, carbon dioxide, water, photosynthesis

Note: A word can be used more than once.

Leaves have a green pigment called___(a)___ which capture ____(b)____from sunlight. This ____(c)____nis usednin the process of____(d)____ and along with other raw materials like ___(e)____ and ___(f)___ synthesize ____(g)____.

Give reasons

1. Nitrogen is an essential nutrient for plant growth. But farmers who cultivate pulse crops like green gram, Bengal gram, black gram, etc. do not apply nitrogenous fertilizers during cultivation. Why?

2. Wheat dough if left in the open, after a few days, starts to emit a foul smell and becomes unfit for use. Give reason.

ASSIGNMENT – 3 (Class – VII)

1. Name the compound used for white washing.
2. Write the effects of blue litmus paper in the following solution:
   (a) Detergent solution
   (b) Sugar solution
   (c) Milk magnesia
   (d) Aerated drinks
   (e) Vinegar

3. How is salt formed?
4. Ammonia is found in many household products, such as window cleaner It turns red litmus blue. What is its nature?
5. Name the following:-

   (a) Substances turn blue litmus red.
   (b) Substances turn red litmus blue.
   (c) Substances which are bitter in taste.
   (d) Substances which are sour in taste
   (e) Acid which is produced in our stomach.

6. Paheli is suffering from indigestion due to acidity. It is advisable to give her orange juice in this situation and why?
7. Form a sentence using the following words-

   Baking soda, ant bite, moist, effect, neutralised, rubbing

8. What are the two things apart from salts that are also released in a neutralization reaction?
9. Blue litmus paper is dipped in a solution. It remains blue. What is the nature of the solution?
10. How will you treat the following:-
    (a) High acidity in the stomach
    (b) Pain caused by bee sting
    (c) Too much acidic soil
    (d) Too much basic soil

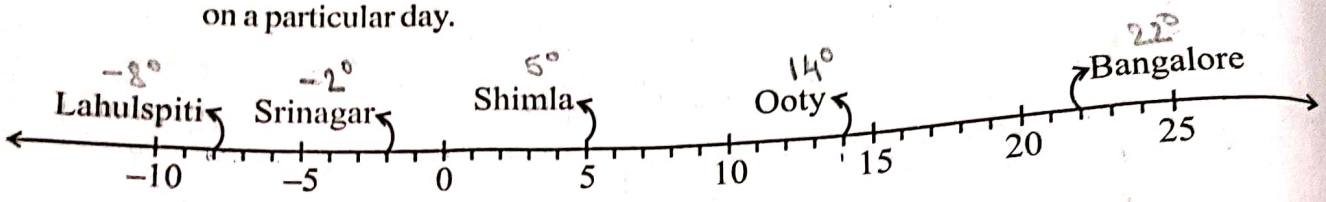
11. Write any three properties of an acid.
12. Write any three properties of a base.
13. Explain why “calamine solution “ is applied on the skin when an ant bites?
14. Complete the equation:-

    Hydrochloric acid + Sodium hydroxide ----> _____ + _____

15. Phenolphthalein when added to a liquid X did not show any colour change. Mention two inferences drawn from this activity.

EXERCISE 1.1

1. Following number line shows the temperature in degree celsius (°C) at different places on a particular day.



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2. In a quiz, positive marks are given for correct answers and negative marks are given for incorrect answers. If Jack's scores in five successive rounds were 25, −5, −10, 15 and 10, what was his total at the end?

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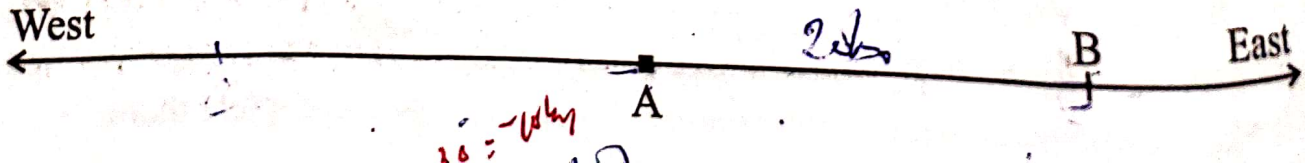
6. Rita goes 20 km towards east from a point A to the point B. From B, she moves 30 km towards west along the same road. If the distance towards east is represented by a positive integer then, how will you represent the distance travelled towards west? By which integer will you represent her final position from A?



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5	–1	– 4
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(i)

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(iii) If the number of steps moved down is represented by negative integers and the number of steps moved up by positive integers, represent his moves in part (i) and (ii) by completing the following; (a) $-3+2-\ldots=-8$ (b) $4-2+\ldots=8$. In (a) the sum (-8) represents going down by eight steps. So, what will the sum 8 in (b) represent?

CLASS - VII, chapter 1 - INTEGERS

Ex 1.1 (Solution).

a, Ans. in the book.

1. b, Difference between hottest and coldest place
$= 22 - (-8) = 22 + 8 = 30^\circ C$

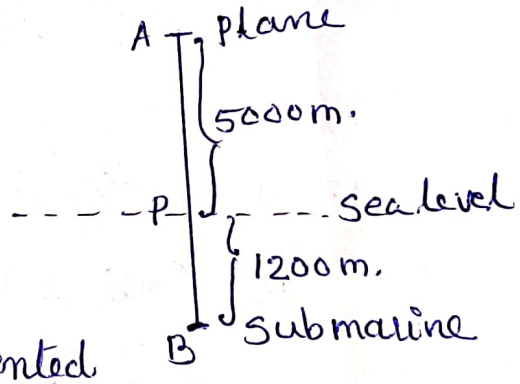
c, Temperature difference between Lahulspiti and Srinagar
$= -2 - (-8) = -2 + 8 = 6^\circ C$

d, Yes. Temperature of Srinagar and Shimla taken together
$= -2 + 5 = 3^\circ C$ is less than Shimla.
But it is not less than temperature of Srinagar (-2°).

2. Jack's total score at the end of five rounds
$= 25 + (-5) + (-10) + 15 + 10$
$= 25 + 15 + 10 + (-5) + (-10)$
$= 50 + (-15) = 50 - 15 = 35$

3. Temperature of Srinagar on Tuesday $= -5 - 2 = -7^\circ C$
Temperature on Wednesday $= -7 + 4 = -3^\circ C$

4. The vertical distance between the plane and the submarine = AP + PB
$= 5000 + 1200 = 6200 m$



5. Amount deposited can be represented by positive integer.
Balance in Mohan's Account $= 2000 - 1642$
$= ₹ 358.$

6. The distance travelled towards the west can be represented by negative integer.
The final position of A $= 20 + (-30) = -10$ km

7. H.W.

8. Verify $\underset{\text{LHS}}{a-(-b)} = \underset{\text{RHS}}{a+b}$ for the following values of a and b.

i, $a = 21, \quad b = 18$

LHS $\quad a-(-b) = 21-(-18) = 21+18 = \underline{\underline{39}}$

RHS $\quad a+b = 21+18 = \underline{\underline{39}}$

$\Rightarrow \quad a-(-b) = a+b$

ii) iii, and iv H.W.

9, a, $(-8)+(-4) \square (-8)-(-4)$

$-12 \quad \square \quad -8+4$

$-12 \quad \boxtimes \quad -4$

b, $(-3)+7-(19) \square 15-8+(-9)$

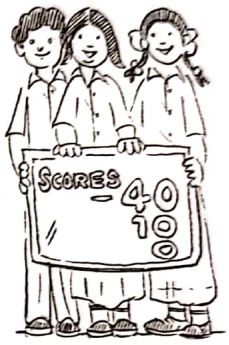
$4-19 \quad \square \quad 7+(-9)$

$-15 \quad \boxtimes \quad -2$

c, d, e H.W.

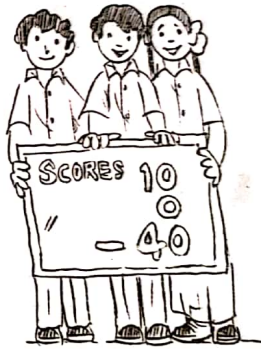
10. Will be discussed in the class.

EXERCISE 1.2



1. Write down a pair of integers whose:
   (a) sum is –7 (b) difference is –10 (c) sum is 0

2. (a) Write a pair of negative integers whose difference gives 8.
   (b) Write a negative integer and a positive integer whose sum is –5.
   (c) Write a negative integer and a positive integer whose difference is –3.



3. In a quiz, team A scored – 40, 10, 0 and team B scored 10, 0, – 40 in three successive rounds. Which team scored more? Can we say that we can add integers in any order?

4. Fill in the blanks to make the following statements true:
   (i) $(-5) + (-8) = (-8) + (\ldots\ldots)$
   (ii) $-53 + \ldots\ldots = -53$
   (iii) $17 + \ldots\ldots = 0$
   (iv) $[13 + (-12)] + (\ldots\ldots) = 13 + [(-12) + (-7)]$
   (v) $(-4) + [15 + (-3)] = [-4 + 15] + \ldots\ldots$

Exc 1.2

1. a) $(-5, -2)$ $[-5+(-2) = -7]$

   b) $(-8, 2)$ $[-8-2 = -10]$

   c) $(-5, 5)$ $[-5+5 = 0]$

2. a) $(-2, -10)$ $[-2-(-10) = -2+10 = 8]$

   b) $(-8, 3)$ $[-8+3 = -5]$

   c) $(-1, 2)$ $[-1-2 = -3]$

3. Team A score $= -40+10+0 = -30$

   Team B score $= 10+0+(-40) = -30$

   $\therefore$ We can add integers in any order.