Holiday Homework
Class VIII
Subject – English

Holiday Homework to be completed in a separate thin notebook.

1. **Spectacular wonders – Page 137 (Write the description of each wonder in about 50 words along with the pictures.**
2. **Write the difficult words along with their synonyms and antonyms. (10 - 15 words from each lesson in Unit 4 and 5) Use the words to make sentences.**
3. **Learn both the poems from Unit 4 and 5. (Harvest Hymn & magnifying glass) The same will be marked as Subject enrichment activity and will carry 10 marks each.**
4. **Biosketch of Bibha Chowdhari**
5. **20 pages writing. One page of writing in neat hand to be undertaken every alternate day.**

SUBJECT- SCIENCE

PARTICULATE NATURE OF MATTER

Question 1.
Which of the following observations best supports the idea that matter is made up of tiny particles?
(a) A sponge absorbs water.
(b) Sugar disappears when stirred into water.
(c) A balloon bursts when pricked.
(d) A mirror reflects light.

Question 2.
What does the persistence of taste in powdered sugar even after grinding show?
(a) Matter cannot be divided.
(b) Sugar is soluble in air.
(c) Particles of sugar retain their properties.
(d) Grinding alters sugar chemically.

Question 4.
Ice melts at 0°C, whereas iron melts at 1538°C. What does this difference in melting points tell us about the particles in these solids?
(a) Ice particles are more tightly packed than iron particles

(b) Iron has stronger interparticle forces than ice
(c) Ice contains gases, so it melts faster
(d) Melting point does not depend on particle arrangement

Question 5.
A student heated some ice cubes in a beaker. As the ice melted into water and later boiled into steam, she observed several changes in particle movement. What caused the ice to melt into water during heating?
(a) Particles decreased in size
(b) Particles gained energy and vibrated more
(c) Particles became heavier
(d) Particles lost energy

Question 6.
Read the statements given below about changes in states of matter.
(i) On heating, solids change into liquids due to an increase in kinetic energy of particles.
(ii) Liquids on cooling lose energy and change into solids.
(iii) Gases can never be liquefied by applying pressure.
(iv) Change of state is a physical change.

Question 7.

Which of the following is the basic unit of matter?
(a) Molecule
(b) Atom
(c) Element
(d) Compound

ANSWER THE FOLLOWING QUESTIONS:

1. What factors decide the state of matter of a substance?

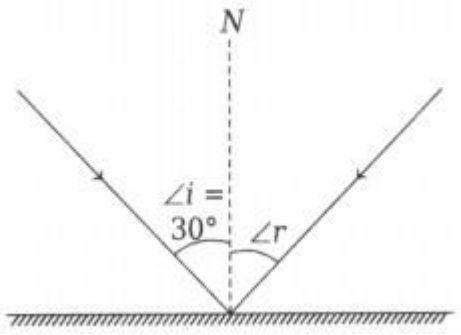
2. What causes matter to change its state?
3. What is the role of temperature in changing the state of matter?
4. How is the arrangement of particles different in liquids and gases?

5. What happens to interparticle forces when a solid melts?
6. Explain how the particles are arranged in a liquid.
7. Describe how interparticle spacing and movement differ in solids, liquids, and gases.
8. Compare the motion of particles in the three states of matter with examples.
9. Describe the arrangement and movement of particles in a solid and compare it with a gas.
10. How do interparticle forces vary between solids, liquids, and gases?
11. Explain how and why a solid changes to a liquid and then to a gas.
12. Why do gases expand to fill any container while solids do not?

LIGHT AND ITS REFLECTION

Question 1.
Which of the following option is correct regarding necessity to see an object?
(a) There must be a source of light.
(b) The light must strike the object.
(c) The light must be reflected from the object to the eye.
(d) All of the above

Question 2.
Angle of incidence for a plane mirror is 30°. What will be the angle between incident and reflected ray?

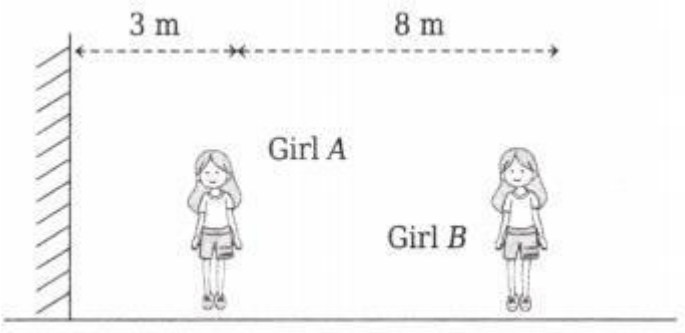


Question 3.
The distance of object placed before a plane mirror is 5 cm from the mirror. What will be the distance of image from the plane mirror?

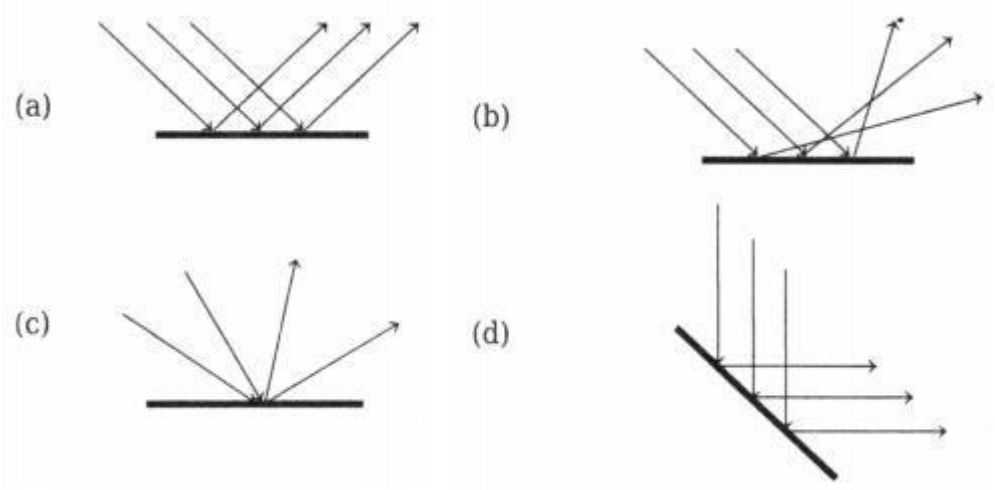
Question 4.
A student looks through a lens and sees an image that is upright, smaller, and appears inside the lens. Which type of lens is she likely using?
(a) Convex lens
(b) Concave lens
(c) Plane glass
(d) Prism

Question 5.
A person uses a lens to read small letters in a book. The image appears bigger and upright. What kind of lens is likely being used?
(a) Concave lens
(b) Convex lens
(c) Plane mirror
(d) Biconcave lens

Question 6.
Two girls are standing in front of a plane mirror as shown. When girl A looks into mirror, how far away from her will image of girl B seem to be?



Question 7.
Following figure represents reflection of light, which of these depicts diffused reflection?



ANSWER THE FOLLOWING QUESTIONS:

1. The angle between the incident ray and the reflected ray is 60°. What is the value of the angle of incidence?

2. The distance between the object and its image formed by a plane mirror appears to be 24 cm. What is the distance between the mirror and the object?

3. Can a real image be obtained on a screen? Explain briefly.

4. Why is a convex mirror called a diverging mirror?

5. Explain why a convex mirror always forms a virtual and diminished image, irrespective of the object's position.

6. The angle between the incident ray and the reflected ray is 80°. Find the angle of incidence.

7. An incident ray strikes a mirror normally. Find the angle of incidence and reflection.

8. How many times is a ray of light reflected by two plane mirrors placed parallel and facing each other?

EXPLORING FORCE AND PRESSURE

A) MCQ:
Question 1.
When two teams pull the rope while playing in a game of tug-of-war, a stage comes when the rope does not move to either side at all. The magnitude of force being applied to the rope by the two

teams at that stage will be
(a) greater on first side
(b) greater on second side
(c) equal
(d) sometimes greater on first side than second side

Question 2.
Two objects repel each other. This repulsion could be due to
(a) frictional force
(b) gravitational force
(c) magnetic force
(d) either a magnetic or gravitational force

Question 3.
During dry weather, while combing hair, sometimes we experience hair flying apart, force responsible for this is
(a) force of gravity
(b) force of friction
(c) electrostatic force
(d) magnetic force

Question 4.
A toy boat floats in water because
(a) it is lighter than air
(b) water pushes it downward
(c) the buoyant force balances its weight
(d) water has no effect on it

Question 5.
A solid iron cube and a hollow plastic cube of the same size are submerged in water. Which experiences more buoyant force and why?
(a) Iron cube, because it is heavier
(b) Plastic cube, because it is hollow
(c) Both experience the same buoyant force, because they displace equal volumes of water
(d) None, because water pushes equally ‘

Question 6.
Two identical blocks are placed in water and oil. One floats higher in w^tef-than in oil. What does this suggest about water and oil?
(a) Oil is denser
(b) Water is denser
(c) Both are equally dense
(d) Density doesn’t matter

B**) Give Reasons for the Following**

1. A moving ball changes direction when hit from the side.

2. Electrostatic force can attract paper without touching it.

3. Objects fall towards the Earth when thrown upwards.

4. The Earth does not need to touch the Moon to pull it towards itself.

5. Water exerts an upward force on submerged objects.

6. A heavy object floats if shaped like a boat, but sinks if made into a solid ball.

ANSWER THE FOLLOWING QUESTIONS:

Question 1.
Is it possible to change the direction of motion of an object without changing the speed of the object?

Question 2.
What is the effect of unbalanced forces on a body?

Question 3.
What kind of force is exerted when we stretch a rubber band?

Question 4.
Which type of force is mainly responsible for changing the shape of clay when pressed?

Question 5.
Why is it easier to roll a heavy drum than to slide it?

Question 6.
Which force is responsible for the wear and tear of machine parts?

Question 7.
What causes a hanging object to fall when its support is removed?

Question 8.
What is the direction of buoyant force on a submerged object?

Question 9.
An inflated ball floats on water but sinks when punctured. Why?

Question 10.
A piece of wood floats on water, but when pressed down and released, it bounces back. What force causes this?

ELECTRICITY: HEATING AND MAGNETIC EFFECT

Multiple Choice Questions

Question 1.
Which material is used to make electromagnets stronger?
(a) Plastic
(b) Wood
(c) Iron
(d) Glass

Question 2.
In an electric heater, why is a coiled wire used instead of a straight wire for the heating element?
(a) To make it look more attractive
(b) To increase resistance and produce more heat
(c) To reduce the cost of manufacturing
(d) To make it easier to replace when broken

Question 3.
During a classroom demonstration, the teacher showed that a voltaic cell stops working after some time because
(a) the metal electrodes get too hot

(b) the chemical get used up
(c) the wires become loose over time
(d) the plastic container develops cracks

Question 4.
When comparing dry cells and rechargeable batteries, which statement's correct?
(a) Dry cells can be reused multiple times like rechargeable batteries
(b) Rechargeable batteries are cheaper in the long run than dry cells
(c) Both work exactly on the same principle
(d) Dry cells are more environmentally friendly than rechargeable ones

Question 5.
Why do engineers use electromagnets in scrap yards instead of permanent magnets?
(a) Because permanent magnets are too expensive
(b) Because electromagnets can be switched on/off when needed
(c) Because permanent magnets don't attract iron
(d) Because electromagnets work without electricity

Question 6.
What precaution should be taken when disposing of used batteries from household devices?
(a) Throw them in regular trash for easy disposal
(b) Burn them to destroy harmful chemicals
(c) Recycle them through proper e-waste channels
(d) Bury them in the backyard

Question 7.
What is the primary reason for using nichrome rather than copper in electric heating devices?
(a) Nichrome is much cheaper than copper
(b) Nichrome has higher electrical resistance
(c) Nichrome doesn't conduct electricity
(d) Nichrome changes colour when heated

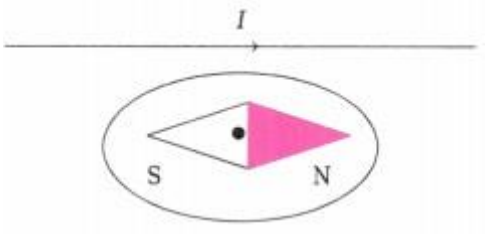
Question 8.
In an electric circuit, if we keep increasing the current through a wire, what eventually happens?
(a) The wire becomes superconducting
(b) The wire's resistance decreases automatically
(c) The wire may overheat and get damaged
(d) The wire starts producing light

Question 9.
Why are lithium-ion batteries preferred for modern electric vehicles?
(a) Because they are the heaviest type of battery
(b) Because they can store more energy for their size
(c) Because they cannot be recharged
(d) Because they work best in cold weather

Question 10.
What important function does the Earth's magnetic field serve for living organisms?
(a) It helps regulate the Earth's temperature
(b) It protects from harmful solar radiation
(c) It makes compasses point randomly
(d) It increases atmospheric pressure

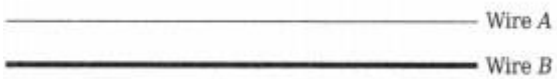
Question 11.
If Earth's magnetic field suddenly disappeared, which technological system would be affected most immediately?
(a) Satellite communications
(b) Compass-based navigation
(c) Cyclone prediction systems
(d) Electromagnets

Question 12.
In the figure, a straight vertical wire is carrying current I and a magnetic compass is placed near it. The compass needle is observed to deflect to the right.



What does this deflection of the compass needle indicate?
(a) The wire has no magnetic effect
(b) The compass is faulty
(c) The magnetic field is present around the wire
(d) The current is flowing downward

Question 13.
In the figure, two wires — Wire A and Wire B — are made of the same material and connected to identical batteries. Both are used as heating elements.



Which wire will get hotter and why?
(a) Wire B, because it allows more current to flow
(b) Wire B, because it has more resistance
(c) Both will get equally hot
(d) Wire A, because it has higher resistance

ANSWER THE FOLLOWING QUESTIONS:

Question 1.

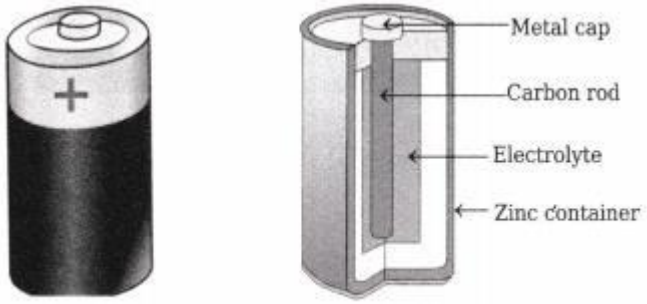
List any two factors that affect the amount of heat generated in a wire.

Question 2.
What type of metal wire produce more heat due to higher resistance?

Question3.
What problem occurs in wires if they overheat during electricity transmission?

Question 4.
Which two metals are commonly used as electrodes in voltaic cells?

Question 5.
Observe the figure of a dry cell shown below and answer the following:



Dry cell

a) Name the part that acts as the positive terminal of the dry cell.
(b) What is the role of the electrolyte in the dry cell?
(c) Which part of the cell gets consumed slowly during the chemical reaction and acts as the negative terminal?

Question 6.
Explain the working of an electric iron. What principle does it use? Why is nichrome used in its heating element? Also, list any two safety precautions to be followed while using such heating appliances.

SUBJECT ENRICHMENT ACTIVITIES

Activity A: Image Formation Study

Observe the image of your face using:

- Plane mirror
- Steel plate
- Inner & outer surface of a spoon

Answer the following:

1. Describe the nature and size of image formed.
2. Identify the type of mirror each surface represents.
3. Explain your observations using laws of reflection.

Activity B: Electricity & Environment

Research:

- How excess electricity consumption affects the environment.

Tasks:

1. Write two impacts.
2. Suggest three solutions.
3. Connect your answer with conservation of resources.

Class VIII SST

A. Geography - Map Work

Label and locate states and union territories with

their capitals on India Map and paste in the notebook.

B. History - I) Read chapter 2&3 and prepare the character sketch of the following personalities -

a. Rani Laxmi Bai

b. Maharaja Ranjit Singh

II) Write the names of the Mughal rulers in a serial order

III) Write the names of the Sikh Gurus in a series order.

C. Civics - Write the Fundamental Rights and Fundamental Duties

of the Indian Constitution.

notebook

AwmI piÑlk ákl,dgSwe

k@w–AwTvlx iv†X-sá™q

1. iviBNn Dm'gkQox k nwm sá™q my< ilK AOr iksI Ek Dm'gkQ kw ivvrx ihdI my< iliKE]sbiDq icZ BI icpkwE]
2. iviBNn @yZox my< Bwrq kI ifijtl pgiq ko dSw'E) AOr sbiDq icZ BI icpkwE] (dIpkm–p9T 73)
3. s$Xwvwcl sá™q my< ilK] 1-100 qk
4. Bwrq k a:qr-pv" pdySox ko Bwrq k mwnicZ my< dSw'E› AOr ank bwry my< jnkrI ilK - pdyS , rwjDwnI , rwjBw†w ,pisd'D pXtn áQl , n:X ,vySBu†w , Bujn (sbiDq icZ BI icpkwE])
5. Dwqu }p ilK– pw , nI , e†' (lt , lot' , l:t' , l|g lkwr)
6. SÑd }p ilK– vwir , m{q' , rwjn' , kId:S' (piØlg , áZilg)

iv†X-ihdI

1. "qIQ' hI nhIx , pÌvI BI pwvn ho!" iv†X pr jn jg}kqw poátr bnweE]
2. Bwrq k ikNhI ds mihlw AOr ds p{† ávqZqw snwinXo k icZ icpkwkr ank nwm, sbiDq rwÈX AOr ank ivS† Xogdwn k bwry my< Ek-do vw#X ilK]
3. (mØhwr–p:9T 136-137) pr dI ge" giqiviD klijE]
4. hird'vwr k bwry my< jnkwrI EkZ krk ilK AOr sbiDq icZ BI icpkwE]
5. AnÇCid ilK– piqXoigqw , mDur vwxI , áváQ jIvn k ilE ÛXwXwm , ivd'XwQI' AOr AnSwsn , myrw ipX KI
6. k) ApnI iksI XwZw k iv†X mx Apny iksI piricq ko pZ ilK] ÛXwkrx (p:9T 258) (AÒXws 44) 2 , 4, 5 , 7
7. svwd–lKn– ÛXwkrx (p:9T 221) (AÒXws–34) – 2 , 3 , 4 K, g , 5 K
8. icZ-vxn– ÛXwkrx (p:9T 223) (AÒXws–35) – 1 , 2 , 5 , 6 , 8
9. ivzwpn–lKn– ÛXwkrx (p:9T 225) 1 sy 4

*ivdXwlX–piZkw k ilE koe" kivqw/khwnI Xw lK AvÜX ilKkr lwE]

ARMY PUBLIC SCHOOL

HOLIDAY HOMEWORK

Class: VIII Subject: Mathematics

Chapter: A Story of Numbers & Number Play (Ganita Prakash)

MCQs

Choose the correct option:

1. The digital root of 76492 is:

(a) 1 (b) 3 (c) 6 (d) 9

2. The Mesopotamian number system was based on the base:

(a) 5 (b) 10 (c) 20 (d) 60

3. The Gumulgal people primarily used counting based on:

(a) Groups of 10 (b) Groups of 2 (c) Groups of 5 (d) Base 8

4. Which of the following pairs are consecutive multiples of 6?

(a) 18, 24 (b) 24, 30 (c) 20, 26 (d) 36, 43

5. Without dividing, which of the following numbers is divisible by 9?

(a) 1345 (b) 5679 (c) 8002 (d) 4521

6. Which of the following is a landmark number in the Roman system?

(a) 90 (b) 500 (c) 250 (d) 200

7. Which of the following numbers is not divisible by 3?

(a) 1110 (b) 1024 (c) 825 (d) 999

8. The digital root of a number is 7. What will be the digital root of the number multiplied by 3?

(a) 1 (b) 3 (c) 7 (d) 9

9.Assertion (A):Every multiple of 12 is divisible by 3.

Reason (R):12 = 3 × 4

10. Assertion (A):The number 462 is divisible by 11.

Reason (R):A number is divisible by 11 if the difference of the sums of its alternate digits is a multiple of 11.

(a) i (b) ii (c) iii (d) iv

Short Answer /

11. Find the greatest digits a and b such that the number 7a3b5 is divisible by both 3 and 5.

12. A shopkeeper charges DCCCXL rupees for a handicraft item and gives a discount of CLV rupees. Find the final cost of the item.

13. Find the multiple of 11 closest to 2500.

Short Answer II

14. State whether the following are Always / Sometimes / Never true:

(a) The sum of two multiples of 8 is a multiple of 16.

(b) The product of three consecutive numbers is divisible by 6.

(c) Rearranging digits of a multiple of 9 always gives another multiple of 9.

15. Convert the following numbers into the given number systems:

(a) 1386 in Egyptian number system

(b) 2460 in Mesopotamian number system

(c) 999 in Mayan number system

Long Answer

16. Evaluate the following:

(a) CXLV + LXXXVI

(b) CCCX – XCIV

(c) L × VI

(d) CDLII ÷ IV

(e) D – CCLXXV

17. A student claims:

"I take a number that leaves remainder 5 when divided by 9 and another number that is 4 more than a multiple of 9. Their sum will always be divisible by 9."

Examine the claim and justify your answer using suitable examples.

Case Based Questions

18. Ananya visits a museum where she sees ancient number records from different civilizations.

(i) Represent 684 using the Egyptian number system.

(ii) Represent 437 using the Chinese rod method.

(iii) Solve 3185 + 427 using the abacus method.

19. Ravi says, "If a number is divisible by 3, then any rearrangement of its digits will also be divisible by 3."

(i) Check whether Ravi's statement is always true.

(ii) Give one example to justify your answer.

Art Integrated Project – Kerala

(Integrate Mathematics with Art, Culture, Geography of Kerala)

CHOOSE ANY 1 project

1. **Kerala Temple Numbers:** Kerala temples often use Roman numerals to mark years of renovation. Choose any temple of Kerala and write the current year in Roman numerals. Decorate it using traditional Kerala mural patterns.

Sample write-up for students

Selected Temple: Shree Padmanabhaswamy Temple, Thiruvananthapuram (Kerala)

The current year is 2025.

2025 in Roman Numerals:

- 2000 = MM
- 20 = XX
- 5 = V

2025 = MMXXV

Art Integration (Decoration Idea):

- Write MMXXV neatly at the centre of the page.
- Decorate the border using traditional Kerala mural motifs, such as:
- Lotus flowers ,Lamps (Nilavilakku), Floral creepers and vines and Temple bells and conch shells
- Use earthy colours commonly seen in Kerala murals:
red, yellow, green, brown, and black.
- You may also draw a small outline of the Padmanabhaswamy Temple gopuram below the numeral.

2. Maths in Kerala Culture (Creative): Make a poster showing the contribution of India (including Kerala scholars like Madhava) to the number system. Highlight the importance of zero and place value using pictures and symbols.

Sample write-up for students