


**SHARDA VIDYALAYA, RISALI, BHILAI**  
**VACATION HOMEWORK (2025)**  
**CLASS-IX**

S. No.	Subject	Topic
1.	<b>ENGLISH</b>	<p>1. What does Evelyn's journey teach us about determination and self-belief?</p> <p>2. Why did Bismillah Khan refuse lucrative offers to settle abroad? What does this say about his values?</p> <p>3. Nowadays use of digital services has increased. Take up a project in groups of four to collect the data of people from CG and Goa on the use of digital services in their daily life. How do the states measure the success of their digital initiatives?</p>
2.	<b>HINDI</b>	<p><b>पोर्टफोलियो: format for portfolio is shown here:</b></p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="width: 30%; text-align: center;">  <p><b>विद्यालय का नाम</b></p> <p>शारदा विद्यालय, रिसाली</p> <p><b>Page-1</b></p> </div> <div style="width: 30%; text-align: center;"> <p><b>छात्र / छात्रा के अपने जवाब</b></p> <p>प्रश्न 1) आत्मको विनय कीर्ति से जन्मदा होता है ?  उत्तर : _____</p> <p>प्रश्न 2) आत्मका विनय कोश कीर्ति - का है ?  उत्तर : _____</p> <p>प्रश्न 3) आत्मके कदा कीर्ति है ?  उत्तर : _____</p> <p>प्रश्न 4) आत्म अपने मन के विनय मनुष्य से प्रसादा प्राप्त करता है ?  उत्तर : _____</p> <p>प्रश्न 5) आत्म धर्मिक से क्या समझा करते हैं ?  उत्तर : _____</p> <p>प्रश्न 6) आत्मको विनय कीर्ति से जन्मदा होता है ?  उत्तर : _____</p> <p>प्रश्न 7) आत्मको विनय का पद पदो पुनरा जाता है ?  उत्तर : _____</p> <p>प्रश्न 8) आत्मको विनय का पद पदो पुनरा जाता है ?  उत्तर : _____</p> <p>प्रश्न 9) आत्मको अपने विनय के कीर्ति से पुन अन्ते करते हैं ?  उत्तर : _____</p> <p><b>Page-5</b></p> </div> <div style="width: 30%; text-align: center;"> <p>प्रश्न : आप अपने बारे में एक अनुच्छेद लिखिए ।</p> <p><b>Page-9</b></p> </div> </div>
<p><b>पोर्टफोलियो</b></p> <p>अपने दोस्तों / पारिवारिक सदस्यों के साथ बिताए पलों के छायाचित्र चिपकाकर प्रस्तुत करें ।</p>		
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="width: 30%; text-align: center;"> <p><b>छात्र/ छात्रा का छायाचित्र</b></p> <p><b>Page-2</b></p> </div> <div style="width: 30%; text-align: center;"> <p><b>Page-6</b></p> </div> <div style="width: 30%; text-align: center;"> <p><b>Page-10</b></p> </div> </div>		
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="width: 30%; text-align: center;"> <p><b>छात्र / छात्रा की सूचना</b></p> <p>छात्र / छात्रा का नाम : _____</p> <p>जन्म तिथि : _____</p> <p>छात्र / छात्रा की उम्र : _____</p> <p>कक्षा व वर्ष : _____</p> <p>अनुक्रमिक : _____</p> <p>विद्यालय में प्रवेश तिथि : _____</p> <p>सम्बन्ध : _____</p> <p>भार : _____</p> <p>रक्त समूह : _____</p> <p>आधार संख्या : _____</p> <p><b>Page-3</b></p> </div> <div style="width: 30%; text-align: center;"> <p><b>Page-7</b></p> </div> <div style="width: 30%; text-align: center;"> <p><b>Page-11</b></p> </div> </div>		
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="width: 30%; text-align: center;"> <p><b>पारिवारिक सूचना</b></p> <p>माता का नाम : _____</p> <p>माता की शैक्षिक योग्यता : _____</p> <p>संपर्क दूरभाष : _____</p> <p>पिता का नाम : _____</p> <p>पिता की शैक्षिक योग्यता : _____</p> <p>संपर्क दूरभाष : _____</p> <p>परिवार के सदस्यों की संख्या : _____</p> <p>भाई - बहन की संख्या : _____</p> <p>घर का पता : _____</p> <p><b>Page-4</b></p> </div> <div style="width: 30%; text-align: center;"> <p><b>Page-8</b></p> </div> <div style="width: 30%; text-align: center;"> <p><b>धन्यवाद !</b></p> </div> </div>		

		<p>निम्नलिखित प्रश्नों के उत्तर कॉपी में लिखें।</p> <p>1- 'पेयजल की बढ़ती समस्या' को लेकर जल पूर्ति अधिकारी को 100 - 120 शब्दों में पत्र लिखिए ।</p> <p>2- चुनाव के दिनों में आपके शहर की दीवारें नारे लिखने और पोस्टर चिपकाने से गंदी हो गई है । इस समस्या की ओर ध्यान आकृष्ट कराते हुए किसी समाचार पत्र के संपादक को 100 -120 शब्दों में पत्र लिखिए ।</p> <p>3- अपनी छात्रावास के जीवन का वर्णन करते हुए अपने मित्र को 100 -120 शब्दों में पत्र लिखिए ।</p> <p>4-'आई पी एल ' मैच का आँखों देखा हाल बताते हुए अपने मित्र को 100 -120 शब्दों में पत्र लिखिए।</p> <p>5-निम्नलिखित विषय पर 150 शब्दों में अनुच्छेद लिखिए ।</p> <p>संकेत बिंदु - यात्रा जिसे मैं भूल नहीं पाता</p> <p>संकेतबिंदु - कहाँ की यात्रा, विशेष घटना का वर्णन अविस्मरणीय कैसे ?</p>
3.	<b>MATHS</b>	<p>1. Art Integrated project- Compare the Birth rate, literacy rate of Kerala and C.G Government. Also prepare a graph of it.</p> <p>2. Solve the given questions: Section A – Multiple Choice Questions (1 mark each) [8 Marks]</p> <p>1. <math>\sqrt{2}</math> is: a) Rational b) Integer c) Irrational d) Whole number</p> <p>2. The decimal expansion of a rational number is always: a) Non-terminating and non-repeating b) Terminating or non-terminating repeating c) Only terminating d) None of these</p> <p>3. Which of the following is an irrational number? a) <math>\frac{4}{5}</math> b) 0.23 c) <math>\sqrt{7}</math> d) 3</p> <p>4. The coordinates of origin are: a) (1, 1) b) (0, 1) c) (0, 0) d) (1, 0)</p> <p>5. If the x-coordinate of a point is zero, the point lies on: a) X-axis b) Y-axis c) Origin d) None</p> <p>6. Rational number between <math>\frac{1}{2}</math> and <math>\frac{3}{4}</math> is:</p>

- a)  $1/3$
- b)  $2/3$
- c)  $3/2$
- d)  $5/4$

7. The product of a rational and an irrational number is:

- a) Always rational
- b) Always irrational
- c) May be rational or irrational
- d) Always zero

8. Which quadrant does the point  $(-3, 4)$  lie in?

- a) I
- b) II
- c) III
- d) IV

### **Section B – Case Study Questions (4 marks each) [8 Marks]**

Question 9:

Ravi wants to plot some points on a graph to create a design. He marks points  $A(2, 3)$ ,  $B(-2, 3)$ ,  $C(-2, -3)$ , and  $D(2, -3)$ .

- a) In which quadrants do these points lie?
- b) What type of figure is formed if we join the points A, B, C, and D in order?
- c) Find the coordinates of the midpoint of diagonal AC.
- d) What is the distance between A and D?

Question 10 :

Aman is creating a game that uses coordinates to locate treasure spots. He places the treasure at point  $T(5, -3)$  and the player starts at point  $P(0, 0)$ .

- a) In which quadrant is the treasure located?
- b) What is the distance between the starting point and the treasure?
- c) If the player moves to point  $Q(5, 3)$ , what is the distance between Q and T?
- d) Are the points P, Q, and T collinear?

### **Section C – Solving Questions (2 marks each) [20 Marks]**

Question 11:

Express  $0.727272\dots$  in the form  $p/q$ .

Question 12:

Simplify:

$$(3 + \sqrt{2})(3 - \sqrt{2})$$

Question 13:

Rationalize the denominator of  $1 / (3 + \sqrt{5})$

Question 14:

Find the decimal expansion of  $7/8$  and state whether it's terminating or non-terminating.

Question 15:

Plot the point  $A(-2, 3)$  and  $B(4, -1)$  on a graph and find the distance AB.

Question 16:

Find the coordinates of the point which lies on the x-axis and is equidistant from  $A(2, 3)$  and  $B(2, -3)$ .

Question 17:

Find 3 irrational numbers between 1 and 2.

Question 18:

Find the distance between the points  $(1, 2)$  and  $(4, 6)$  using distance formula.

Question 19:

Write the coordinates of the vertices of a square of side 2 units in the first quadrant, one vertex at origin.

Question 20:

Check whether the points  $A(1, 2)$ ,  $B(4, 5)$ , and  $C(7, 8)$  lie on a straight line.

Question 21:

		<p>Find the square root of 50 up to 3 decimal places.</p> <p>Question 22: If <math>\sqrt{3} = 1.732</math>, find the value of <math>5\sqrt{3} - 2\sqrt{3}</math>.</p> <p>Question 23: Find the value of: <math>(\sqrt{7} - \sqrt{5})(\sqrt{7} + \sqrt{5})</math></p> <p>Question 24: Rationalize and simplify: <math>3 / (\sqrt{5} - \sqrt{2})</math></p> <p>Question 25: Find a rational number whose decimal expansion terminates after 4 decimal places.</p>
4.	<b>SOCIAL SCIENCE</b>	<ol style="list-style-type: none"> <li>1. Make a weather report of April and May month and find the difference between them with finding the average.</li> <li>2. The inter-relationship between human beings and their physical environment and how that influences the lives hoods, culture and the biodiversity of the region.</li> <li>3. Cartoon interpretation to summarize the benefits of democracy.</li> </ol> <p>Note:-All homework should be done in project file.</p>
5.	<b>SCIENCE</b>	<p><b>PHYSICS:</b></p> <p><b>1. Art Integrated project-</b> <b>Topic:</b>Motion in nature and life. Divide your file in 4 sections to represent: 1.Uniform Motion (e.g., a car moving at a constant speed) 2.Non-uniform Motion (e.g., a person walking then running) 3.Rectilinear Motion (e.g., a train moving on straight tracks) 4.Curvilinear or Circular Motion (e.g., planets, a merry-go-round) <b>Note:</b>In each section:Draw or paste pictures showing real-life examples.Label the type of motion.Add a short explanation (2-3 lines). Use colors, arrows, and art to show direction and speed visually.</p> <p><b>2. WORKSHEET</b></p> <ol style="list-style-type: none"> <li>1 .What to you mean by motion. Write different types of motion.</li> <li>2. Write the difference between speed and Velocity.</li> <li>3.Give Difference between Distance and Displacement.</li> <li>4. What do you mean by acceleration. Write it's unit. Give difference between uniform acceleration and Non uniform acceleration.</li> <li>5. Draw Distance Time graph for following cases: <ol style="list-style-type: none"> <li>(a) When the body is at rest.</li> <li>(b) When the body is in uniform motion.</li> </ol> </li> <li>6. Abdul wild driving to school, compute the average speed of his trip to be 20 km/ h.On his return trip along the same route ,there is less traffic and average speed is 40 km/ h.What is the avg.speed of abdul's trip?</li> <li>7.Write three equation of motion with their usual notation.</li> <li>8.what do you mean by circular motion.</li> <li>9.A car accelerates uniformly from 18 km/h to 36 km/h in 5 second. Calculate: <ol style="list-style-type: none"> <li>(a) Acceleration</li> <li>(b) Distance cover by car in that time.</li> </ol> </li> <li>10. Draw Distance Time graph when object is in rest condition.</li> </ol> <p>-----</p> <p><b>CHEMISTRY:</b></p> <p><b>1. AIL PROJECT</b> Tabulate Metals and Non- metals with symbols, atomic number, atomic mass, Electronic configuration and uses found in Kerala and Chhattisgarh in power point presentation.</p> <p><b>2. Work sheet</b></p>

### Long Answer Type

Question 1. Describe these

a. Sublimation b. Diffusion c. Plasma d. Brownian motion e. Effect of pressure

Question 2.

What is latent heat? Describe its type with example?

Question 3.

What is evaporation? Describe with example? What are the factors influencing evaporation?

short answer Type

### Question 4.

Give reasons-

a. The water kept in earthen pot (matka) remain cool?

b. Smell of perfume is spread all over the room.

c. If we put acetone or spirit in our palm feel cool.

d. Gases fill their container completely.

e. An iron almirah is said to be solid.

### Question 5.

Differentiate between-

a. Boiling point and melting point

b. Diffusion in solid and diffusion in liquid

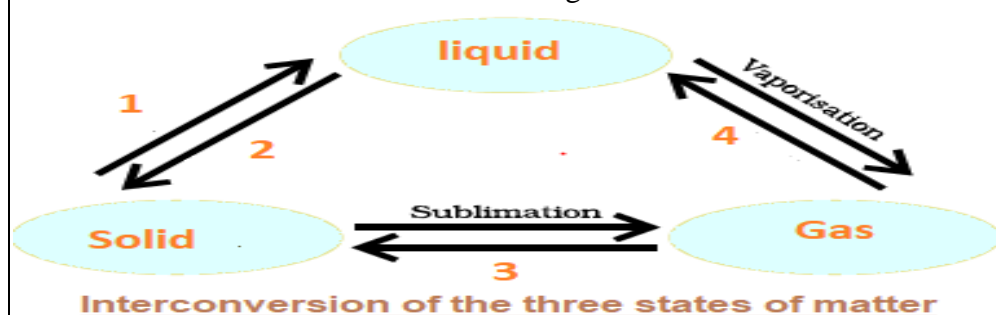
c. Boiling and evaporation

### Question 6.

Write the characteristics of particle of matter? Describe any two of it with example and activity?

### Question 7.

Write the terms for numbers in the below figure



### Question 7.

a) Convert  $35^{\circ}\text{C}$  to  $^{\circ}\text{F}$  and  $\text{K}$     b) Convert  $77^{\circ}\text{F}$  to  $^{\circ}\text{C}$  and  $\text{K}$

### Question 8.

i) A bowl of water and a bowl of ethanol are kept inside a room. Which bowl will get empty first?

ii) "Evaporation is a surface phenomenon." Explain.

## BIOLOGY

1. ART Integrated Project

### Artistic Interpretation:

- **Chhattisgarh Cells:** Incorporate elements of Gond or Pithora art styles into the cell diagrams. Use bold outlines and vibrant colors typical of Gond art, or the dot and line patterns of Pithora. You can even depict the nucleus or other organelles as stylized natural motifs found in these art forms.
- **Kerala Cells:** Incorporate elements of Kerala mural art or Theyyam motifs into the cell diagrams. Use natural-looking colors and the characteristic lines and shading of murals. Organelles could be stylized using shapes and patterns found in Theyyam face painting or traditional Kerala designs.

2. Answer the following questions:

		<ol style="list-style-type: none"> <li>1. What is the cell theory? State its three main postulates.</li> <li>2. Differentiate between a prokaryotic cell and a eukaryotic cell, providing at least three key structural differences. Give one example of an organism with prokaryotic cells and one with eukaryotic cells.</li> <li>3. Draw a well-labelled diagram of a typical animal cell and a typical plant cell. Label at least five organelles in each diagram and briefly state the primary function of each labelled organelle.</li> <li>4. Explain the concept of the plasma membrane as a selectively permeable barrier. Describe the roles of proteins and lipids in its structure and function.</li> <li>5. Describe the process of diffusion and osmosis. How are these processes important for the transport of substances across the cell membrane?</li> <li>6. What are the main functions of the following organelles within a eukaryotic cell: <ul style="list-style-type: none"> <li>○ Mitochondria</li> <li>○ Ribosomes</li> <li>○ Endoplasmic Reticulum (both Rough and Smooth)</li> <li>○ Golgi Apparatus</li> <li>○ Lysosomes</li> </ul> </li> <li>7. Compare and contrast the cell wall of a plant cell with the cell wall of a bacterial cell in terms of their composition and function.</li> <li>8. Explain the role of the nucleus in a eukaryotic cell. What is the genetic material found within the nucleus, and how is it organized?</li> <li>9. Describe the process of endocytosis and exocytosis. Provide one example of how each of these processes is utilized by cells.</li> <li>10. Imagine a cell that lacks ribosomes. What essential function(s) would this cell be unable to perform, and what would be the likely consequences for the cell?</li> </ol>
6.	<b>AI</b>	<p>Prepare a file and write the answer in A4 size papers.</p> <ol style="list-style-type: none"> <li>1. Write about any two applications of AI in different areas.( Banking, Retail, Healthcare, Entertainment,etc). Paste pictures also.</li> <li>2. Imagine the world in 2050 and write a letter to your friend sharing your view about smart cities and smart homes.</li> <li>3. List the different stages of AI and find out the stage we are currently living in. Justify your answer.</li> </ol>
7.	<b>IT</b>	<p>Make a file and write in A4 size papers.</p> <ol style="list-style-type: none"> <li>1- Create a document in Open Office Writer showing the difference between Chhattisgarh and Kerala in the field of IT Sector (Companies &amp; job options) Your document should be in the given formattings: <ol style="list-style-type: none"> <li>a. Font face- Heading- Monotype Corsiva, Text- Bookman Old Style</li> <li>b. Font size: As per choice. Heading should be in Bold and Underlined</li> <li>c. Font color – Heading- Blue, Text- Either Red or Pink</li> <li>d. Header &amp; Footer- Header should be: CLASS- IX/Sec. (2024-25), Color- Green Footer should be: Made by- &lt;Your_name&gt;&amp; Guided by- &lt;Teacher_name&gt;, Color- Green, Images: As per the topics.</li> </ol> </li> <li>2. Write the name of different icons present on Drawing toolbar. Draw/Paste its pictures.</li> <li>3. Paste an image of the keyboard and write its various categories of keys.</li> </ol>
8.	<b>MARKETING</b>	<p><b>Assignment-1</b></p> <p><b>Q1. Multiple choice question</b></p> <ol style="list-style-type: none"> <li>1. .... is the father of modern marketing (a) Abraham Maslow (b) Lester Wunderman (c) Peter Drucker (d) Philip Kotler</li> <li>2. Marketing is a process which aims at..... (a) Production (b) Profit-making (c) The satisfaction of customer needs (d) Selling products</li> <li>3. .... is not a type of marketing concept.</li> </ol>

		<p>(a) The production concept (b) The selling concept</p> <p>(c) The societal marketing concept (d) The supplier concept</p> <p>4. Why is marketing important for businesses?</p> <p>(a) To reduce operational costs (b) To maximize shareholder value</p> <p>(c) To understand and satisfy customer demands (d) To minimize employee turnover</p> <p>5. What is the primary focus of the product concept in marketing?</p> <p>(a) Understanding and fulfilling customer needs</p> <p>(b) Maximizing short-term profits</p> <p>(c) Emphasizing product quality and features</p> <p>(d) Minimizing production costs</p> <p>6. What characterizes the selling concept in marketing?</p> <p>a) Building strong customer relationships (b) Understanding market trends and demands</p> <p>(c) Promoting products or services (d) Engaging in societal welfare activities</p> <p>7. What does the social marketing concept aim to achieve?</p> <p>(a) Maximizing short-term profits (b) Satisfying customer needs and wants</p> <p>(c) Promoting societal welfare and behavior change</p> <p>(d) Minimizing marketing expenses</p> <p>8. What does the term sales primarily refer to in business?</p> <p>(a) Building customer relationships (b) Promoting products or services</p> <p>(c) Conducting market research (d) Setting production targets</p> <p>9. Which utility is concerned with the value created through transporting goods to where they are needed?</p> <p>(a) Form utility (b) Time utility (c) Place utility (d) Possession utility</p> <p>10. What primary function does a sales organization serve in a business?</p> <p>(a) Minimizing sales revenue</p> <p>(b) Reducing customer interactions</p> <p>(c) Maximizing product variety (d) effectively achieving sales targets and customer satisfaction</p> <p><b>LONG ANSWER QUESTION</b></p> <p>1. Gagan and Sumit are students of Class IX studying in a reputed school. They were discussing about sales and marketing as career options for their future. Gagan is of the view that selling and marketing are one and the same. However, Sumit thinks that marketing is much wider concept than selling. Who has correct opinion about the concepts of selling and marketing – Gagan or Sumit? Explain, giving reasons.</p>
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