

SHARDA VIDYALAYA, RISALI SECTOR BHILAI

SESSION: 2023-24

VACATION HOMEWORK

CLASS - X

S_NO	SUBJECT	VACATION HOMEWORK
1	ENGLISH	<p>Q.1 Research on the conditions of farmers in Kerala/Chattisgarh and make a PPT and a project file on the given topic. Go through all the details of life, living patterns and conditions of their land and make the project.</p> <p><b>GRAMMAR</b></p> <p>Q.2 Make a portfolio on classification of determiners. Your portfolio should contain the following points-</p> <ol style="list-style-type: none"><li>1. School's photo and name in bold-</li><li>2. Student's photo</li><li>3. Student's name</li><li>4. class</li><li>5. section</li><li>6. Roll number</li><li>7. Father's name</li><li>8. Mother's name</li><li>9. Hobby</li><li>10. strength (2 points)</li><li>11. weakness (2 points)</li><li>12 prepared by, submitted to, Principal Ma'am</li><li>13. Objectives of your portfolio</li><li>14. Questions( include data, pictures to make it creative )</li></ol>
2	HINDI	<p>१) कला समेकित गतिविधि :- छत्तीसगढ़ एवं केरल के त्यौहारों का अंतर बताते हुए उनकी विशेषताएँ स्पष्ट करें।</p> <p>२)पोर्टफोलियो - आपने जिन कवियों के विषय में पढ़ा है ,उनमें से आपका प्रिय कवि कौन है और क्यों ?स्पष्ट करें।</p>
3	MATHS	<p><b>Portfolio</b> : - Prepare a file to show the application of maths in our daily life.</p> <p>Q.1 If <math>a=2^3 \times 3</math>, <math>b=2 \times 3 \times 5</math>, <math>c=3^n \times 5</math> and <math>LCM [a,b,c] = 2^3 \times 3^2 \times 5</math> then, <math>n=?</math></p> <p>Q.2 144 cartons of coke cans and 90 cartons of Pepsi cans are to be stacked in a canteen. If each stack is of the same height and is to contain cartons of the same drink, what would be the greatest number of cartons each stack would have?</p> <p>Q.3 Prove that <math>7 + 3\sqrt{2}</math> is not a rational number.</p> <p>Q.4 A charitable trust donates 28 different books of Maths, 16 different books of science and 12 different books of Social Science to the poor students. Each student is given maximum number of books of only one subject of his interest and each student got equal number of books</p> <ol style="list-style-type: none"><li>i. Find the number of books each student got.</li><li>ii. Find the total number of students who got books.</li></ol>

		<p>Q.5 For what value of k is 3 a zero of the polynomial <math>2x^2 - x + k</math> ?</p> <p>Q.6 If <math>\alpha, \beta</math> are the zeros of the polynomial <math>6y^2 - 7y + 2</math>, find a quadratic polynomial whose zeros are</p> <p>Q.7. If <math>\alpha, \beta</math> are the zeros of the polynomial <math>6y^2 - 7y + 2</math>, find a quadratic polynomial whose zeros are <math>\frac{1}{\alpha}, \frac{1}{\beta}</math>.</p> <p>Q.8 If the sum and product of the zeros of the polynomial <math>ax^2 - 6x + c</math> is equal to 12 each, find the value of a and c each.</p> <p>Q.9 If sum of the squares of the zeroes of the quadratic polynomial <math>f(x) = x^2 - 8x + k</math> is 40, find the value of k.</p> <p>Q.10 If <math>\alpha</math> and <math>\beta</math> are zeroes of the quadratic polynomial <math>x^2 - (k + 6)x + 2(2k - 1)</math>. Find the value of k if <math>\alpha + \beta = \frac{1}{2} \alpha \beta</math>.</p> <p><b>Portfolio:-</b> Prepare a file to show the application of maths in our daily life.</p>
4	SCIENCE	<p><b>Physics :</b></p> <p>Q.1 What type of image is formed on a cinema screen?</p> <p>Q.2 Draw ray diagram for the image formation by a concave mirror and convex mirror for all the position of the object.</p> <p>Q.3 a) Write different application of concave mirror and convex mirror. b) A child is standing in front of a magic mirror. She finds the image of her head bigger, the middle portion of her body of the same size and that of the legs smaller. Give the following in the order of combinations for the magic mirror from the top.</p> <p>Q.4 a) List four characteristics of the images formed by plane mirrors? b) A candle is kept in front of plane mirror at distance of 15 cm. What is distance between candle &amp; its image?</p> <p>Q.5 Magnification of a mirror is <math>+2/3</math>. What type of mirror is it?</p> <p><b>Biology :</b></p> <p>1. Draw a neat labeled diagram of and write two functions of it. a) Stomata    b) Small intestine    c) Liver</p> <p>2. Draw a labeled diagram of – a) Human Digestive system b) Human Respiratory system</p> <p>3. Differentiate between – a) Autotrophs and Heterotrophs b) Aerobic and Anaerobic respiration c) Parasitic and holozoic nutrition d) Saprophytic and parasitic nutrition</p> <p>4. Assess the diversity in the balance of nutrient consumption and level of food security in the household, group of person in family within 24 hours. Prepare a Food Guide Pyramid showing dietary diversity. (Give score 1-6 if consumes accordingly.)</p>

## Chemistry :

**Q1.** What change in colour is observed when white silver chloride is left exposed to sunlight?

**Q2 . In the equation**  $a\text{Al} + b\text{H}_2\text{SO}_4 \rightarrow c\text{Al}_2(\text{SO}_4)_3 + d\text{H}_2$

a, b, c, d are respectively

2, 3, 1, 1

b) 2, 3, 1, 3

c) 2, 3, 2, 3

d) 2, 2, 3, 3

**Q3.** Which of the following listed metals can displace zinc from its salt solution?

Give reason for your answer with a chemical equation: Copper, Lead, Magnesium, Silver

**Q4. In reaction,**  $2\text{Ag} + 2\text{H}_2\text{SO}_4 \rightarrow \text{Ag}_2\text{SO}_4 + 2\text{H}_2\text{O} + \text{SO}_2$

$\text{H}_2\text{SO}_4$  acts as a -

a) Reducing agent

b) Oxidizing agent

c) Dehydrating agent

d) None

**Q5.** Why magnesium ribbon clean before burning?

**Q6.** Which Substance is used for white-washing and its mixture with water feel hot?

**Q7. Write the following reactions in the form of chemical equations and balance them.**

a) Calcium oxide reacts with water to form calcium hydroxide

b) Magnesium reacts with nitrogen to form magnesium nitride

c) Potassium chlorate decomposes to form oxygen and potassium chloride.

**Q8** What Is Redox Reaction? Identifying The Substance Oxidised And The Substance Reduced In The Following Reactions:

(i)  $2\text{PbO} + \text{C} \rightarrow \text{Pb} + \text{CO}_2$

(ii)  $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + \text{H}_2\text{O} + \text{Cl}_2$ . [CBSE 2012]

**Q9.** Classify The Following Chemical Reactions As Exothermic Or Endothermic:

(i) Water Is Added To Quick Lime.

(ii) Dilute Sulphuric Acid Is Added To Zinc Granules.

(iii) When Ammonium Chloride Is Dissolved In Water In A Test Tube It Becomes Cold.

(iv) The Decomposition Of Vegetable Matter Into Compost.

(v) Electrolysis Of Water.

(vi) Silver Chloride Turns Grey In The Presence Of Sunlight To Form Silver Metal. [CBSE 2017]

**Q10. Indicate the substance oxidized, reduced, acting as reducing agent & oxidizing agent in the following reactions.**

a)  $\text{Cl}_2 + 2\text{KI} \rightarrow 2\text{KCl} + \text{I}_2$

b)  $\text{MgO} + \text{C} \rightarrow \text{Mg} + \text{CO}$

c)  $\text{Fe} + 2\text{HCl} \rightarrow \text{FeCl}_2 + \text{H}_2$

		<p><b>Q11. Mention the type of reaction in each of the following-</b></p> <ol style="list-style-type: none"> <li><math>\text{CaCO}_3 + \text{H}_2\text{O} + \text{CO}_2 \rightarrow \text{Ca}(\text{HCO}_3)_2</math></li> <li><math>\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}</math></li> <li><math>\text{Pb} + \text{CuCl}_2 \rightarrow \text{PbCl}_2 + \text{Cu}</math></li> </ol> <p><b>Q12. What happens when <math>\text{CO}_2(\text{g})</math> is bubbled through lime water</b>  a) in small amount?      b) in excess?</p> <p><b>Q13. On mixing the solution of lead nitrate and potassium iodide prepared in water</b></p> <ol style="list-style-type: none"> <li>write the chemical reaction involved in balanced form</li> <li>What is the colour of the precipitate? Name the precipitate.</li> </ol> <p><b>Q14. Write the following reactions in the form of chemical equations and balance them.</b></p> <ol style="list-style-type: none"> <li>Calcium oxide reacts with water to form calcium hydroxide</li> <li>Magnesium reacts with nitrogen to form magnesium nitride</li> <li>Potassium chlorate decomposes to form oxygen and potassium chloride.</li> </ol>
5	<p align="center"><b>SOCIAL SCIENCE</b></p>	<ol style="list-style-type: none"> <li>Development of a country is generally determined by-  a) Its per capita income      b) Its average literacy rate  c) Health status of its people      c) All the above</li> <li>According to per capita income prepared by the world bank, in which category is India included?  a) Rich countries      b) Middle income countries  c) Low middle income countries      d) None of the above</li> <li>Resources which are surveyed and their quality and quantity have been determined for utilization is known as _____.  a) Potential resources      b) Stock      c) Developed resources      d) Reserves</li> <li>_____ zone is the oceanic zone in which the country has the right to do fishing, drilling, etc.  a) Marine economic      b) Exclusive economic  c) Aquatic economic      d) International economic</li> </ol> <p><b>Assertion and Reason based questions-</b>  Alternatives-</p> <ol style="list-style-type: none"> <li>Both Assertion (A) And Reason (R ) are true and Reason (R) is correct explanation of Assertion(A).</li> <li>Both Assertion (A) And Reason (R ) are true and Reason (R) is not the correct explanation of Assertion(A).</li> <li>Assertion (A) is true but Reason(R) is false</li> <li>Assertion (A) is false but Reason(R) is true</li> </ol> <p>5. Assertion (A)-The availability of resources is a necessary condition for the development of any region.</p> <p>Reason (R)- Availability of resources in the absence of corresponding changes in technology may obstruct development.</p> <p>6. Assertion(A)-Land is a natural resource of utmost importance.  Reason(R) –It supports natural vegetation, wildlife, human life, economic activities</p>

		<p>,transport and Communication systems.</p> <p><b>Source based Questions:</b></p> <p>Arid soils range from red to brown in colour. They are generally sandy in texture and saline in nature. In some areas the salt content is very high and common salt is obtained by evaporating the water. Due to the dry climate, high temperature, evaporation is faster and the soil lacks humus and moisture. The lower horizons of the soil are occupied by kankar because of the increasing calcium content downwards. The kankar layer formations in the bottom horizons restrict the infiltration of water. After proper irrigation, these soils become cultivable as has been in the case of Western Rajasthan.</p> <p>7.How can arid soil be identified?</p> <p>8. Which crops are grown in arid soil?</p> <p>9.Where is arid soil found in India?</p> <p>10.What restricts the infiltration of water in arid soil?</p> <p>11.Among Maharashtra, Kerala, and Bihar which state has least per capita income?</p> <p>12.What do you understand by the term life expectancy?</p> <p>13. Define A) Per Capita Income B) Net Attendance Ratio.</p> <p>14. “Money cannot buy all the goods and services that one needs to live well” Explain.</p> <p>15.Why do people look a mix goals for development?</p> <p>16. Give three examples where an average is used for comparing situations.</p> <p>17.How resources are classified on the basis of development status.</p> <p>18. Distinguish between renewable and non- renewable resources.</p> <p>19. “Planning is widely accepted strategy for judicious use of resources in a country like India.” Justify this statement with two relevant points and an example.</p> <p>20. Portfolio activity-Collect any three types of soil and write its characteristics.</p>
6	AI	<p>1. To be done in Practical file: On A4 size paper, paste the image and write a life sketch of any famous personality from Kerala and C.G. state who achieve</p> <p>2. Prepare an effective presentation in MS-PowerPoint, on the topic “Famous robots made using AI”. (Minimum 8-10 slides).</p>
7	IT	<p>1. To be done in Practical file: On A4 size paper, paste the image and write a life sketch of any famous personality from Kerala and C.G. state who achieve</p> <p>2. In Open Office Writer, create a shape of mirror using auto shapes and then group the objects of the shape. Also create Table of Content for your current month syllabus of all 6 subjects where headings have Orange color and page numbers with Blue color.</p>