



SACRED HEART SCHOOL

Jhumri Telaiya, Koderma

SUMMER VACATION ASSIGNMENT (2020–2021)

Class - X

Subject –ALL

HISTORY

1. Revise the first chapter of each subject including questions of NCERT.
2. And also solve these questions
 - a. Justify the statement with suitable examples “The Nationalism, aligned with imperialism, led Europe to disaster in 1914.”
 - b. What is your opinion on the conservative regime which was set up in 1815?
 - c. What do you mean by nationalism? Mention some factors which give rise to nationalism.
 - d. Resource planning is essential for sustainable existence in all forms of life. Analyse the statement.
 - e. India has enormous diversity in the availability of resources. Explain.
 - f. Do you think that resources are free gifts of nature as is assumed by many? Justify your answer with any ten suitable arguments.
 - g. Power may also be shared among different social groups. Explain by giving examples.
 - h. Why are the countries of the Middle East not called developed in spite of high per capita income?
 - i. For development people look at a mix of goals. Support the statement with suitable examples.
 - j. What is meant by sustainable development? Explain it by taking the case study of water.

3. PROJECT WORK (Any one)

Prepare a project which should not exceed 10 pages and should include the following heads

- a. Preface b. Index c. Detailed report of the topic.

A. (CIVICS)

Pressure Groups or Interest Groups

- a. Meaning of Pressure and Interest Groups.

PHYSICS

1. What do you mean by light? Write its characteristics. Prepare a list of luminous and non-luminous object.
2. What is magnification? Write the cases of magnification of a mirror.
3. Write the five applications of each concave and convex mirror.
4. Which type of mirror is used in looking glass in motor vehicles? And why?
5. Draw the ray diagrams of the object in all the cases of concave mirror.
6. Do all the blue and exercise questions of NCERT book of chapter 12.

PRACTICAL

1. To determine focal length of a concave mirror.
2. To determine focal length of a convex lens.

CHEMISTRY

1. Ferrous sulphate decomposes with the evolution of a gas having a characteristic odour of burning

- sulphur. Write the chemical reaction involved and identify the type of reaction.
2. A solution of potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed. Write the chemical reaction involved and also mention the type of the chemical reaction.
 3. A substance X, which is an oxide of a group 2 element, is used intensively in the cement industry. This element is present in bones also. On treatment with water it forms a solution which turns red litmus blue. Identify X and also write the chemical reactions involved.
 4. Why do we store silver chloride in dark coloured bottles?
 5. What happens when zinc granules are treated with dilute solution of sulphuric acid, hydrochloric acid, nitric acid, NaCl and NaOH, also write the chemical equations, if reaction occurs?
 6. What happens when a piece of aluminium metal is added to dilute hydrochloric acid? Also, write the balanced chemical equation, if reaction occurs.
 7. On adding a drop of Barium Chloride solution to an aqueous solution of sodium sulphite, white precipitate is obtained.
 - (a) Write a balanced chemical equation of the reaction involved.
 - (b) On adding dilute hydrochloric acid to the reaction mixture, white precipitate disappears. Why?
 8. What happens when a piece of zinc metal is added to copper sulphate solution. Write the balanced chemical equation.
 9. Zinc liberates hydrogen gas when reacted with dilute hydrochloric acid, whereas copper does not. Explain, why?
 10. A magnesium ribbon is burnt in oxygen to give a white compound X accompanied by emission of light. If the burning ribbon is now placed in an atmosphere of nitrogen, it continues to burn and forms a compound Y.
 - (a) Write the chemical formulae of X and Y
 - (b) Write a balanced chemical equation, when X is dissolved in water.
 11. A silver article generally turns black when kept in the open for a few days. The article when rubbed with toothpaste again starts shining.
 - (a) why do silver articles turn black when kept in the open for a few days? Name the phenomenon involved.
 - (b) Name the black substance formed and give its chemical formula.
 12. On heating blue coloured powder of copper (II) nitrate in a boiling tube. Copper oxide (black), oxygen gas and a brown gas X is formed. Write a balanced chemical equation of the reaction. Identify the brown gas X evolved.

Activity Based Questions

13. A silvery white metal X is in the form of ribbons. Upon ignition, it burns with a dazzling white flame to form white powder Y. When water is added to the powder Y, it partially dissolves to form a substance Z which is used as an antacid.
 - (a) what is metal X?
 - (b) Name the white powder Y.
 - (c) What is the substance Z.
 - (d) Write the chemical reactions that are taking place.
14. The gases hydrogen and chlorine do not react with each other even if kept together for a long time. However, in the presence of sunlight, they readily combine. What does actually happen?

BIOLOGY

1. Write the activity to demonstrate that chlorophyll is essential for photosynthesis.
2. Draw a neat labelled diagram of human digestive system and nephron.

3. To prepare a tabular chart to show different digestive glands, its enzyme and functions.

3. Complete the blue and exercise question answer of chapter 6 life processes from NCERT.

ENGLISH

1. Write all the rules of Modals in your class work copy with proper examples for all the rules.
2. complete the notes of Chapter 1, 2 and 3 of First Flight.
3. Write a poem by yourself in three quatrains.
4. write a story in at least 300 words from the given beginning:
My grandmother was very fond of stories but she didn't know how to read. I watched the lines of worry of being illiterate on her wrinkled face.

HINDI

1. बच्चों के दंतुरित मुस्कान का लोगों पर क्या प्रभाव पड़ता है?
2. गोपियों ने उद्धव की तुलना किन-किन चीजों से की है और क्यों?
3. गोपियों ने राज धर्म के बारे में क्या कहा है?
4. लक्ष्मण ने वीर योद्धा के कौन-कौन सी विशेषताएं बताई हैं?
5. जीवन में वीरता और साहस के साथ यदि विनम्रता भी हो तो व्यक्ति महान बन जाता है। इस बात की पुष्टि "राम परशुराम लक्ष्मण संवाद" पाठ के आधार पर करें।
6. नेताजी का चश्मा कहानी का सारांश अपने शब्दों में लिखें।
7. कवि के अनुसार फसल क्या है? फसल के लिए आवश्यक तत्व को लिखें।
8. गर्मी के दस्तक देते ही पेयजल की समस्या उत्पन्न हो गई है। तुम्हारे मोहल्ले में लगे चापा नलों में से अधिकांश खराब पड़े हैं। इस समस्या की ओर स्थानीय प्रशासन का ध्यान आकर्षित करने के लिए किसी दैनिक समाचार पत्र के संपादक को पत्र लिखें।

SANSKRIT

- 1 समाज के सभी वेदों से पांच पांच उदाहरण लिखें।
- 2 संधि के सभी नियमों से 10-10 उदाहरण लिखे तथा याद करें।
- 3 वेद कितने प्रकार के होते हैं ऋग्वेद से किन्ही दो श्लोकों को लिखें।
- 4 महाभारत के सभी पात्रों के नाम (वंशावली, फैमिली ट्री) लिखें। शांतनु से परीक्षित तक (फाइल में)
- 5 संस्कृत के प्राचीन स्थिति से आधुनिक स्थिति तक वर्णन करें।

MATH

Q1. Without drawing actual graph, find the zeroes of the following polynomials if any.

- (a) $x^2 - 2x - 8$ (b) $-x^2 - 2x + 3$ (c) $x^2 + x + 1$ (d) $x^2 - 1$
(e) $x^2 + 4x + 4$ (f) $-4x^2 + 4x - 1$

Q2. Draw the graphs of each of the following polynomials and if possible, read the zeroes from the graph:

- (a) $x^2 - 2x + 9$ (b) $-2x^2 + 4x$ (c) $x^2 + 2x - 3$
(d) $x^2 - 8x + 16$ (e) x^3 (f) $x^3 - x^2$

Q3. Draw the graph of the polynomial $x^2 - 3x - 10$. Read off the zeroes of the polynomial from the graph. Also show that the axis of symmetry on it.

Q4. Show that 2 and $-\frac{1}{3}$ are the zeroes of the polynomial $p(x) = 3x^2 - 5x - 2$.

Q5. Show that the polynomial $p(x) = x^2 - 4x + 9$ have no zeroes.

Q6. Find the zeroes of each of the following quadratic polynomial. Also, in each case, verify the relationship between the zeroes and its coefficients.

- (a) $x^2 + 8x + 12$ (b) $x^2 + 3x - 4$ (c) $x^2 - 7x + 10$ (d) $y^2 - 4$

Q7. Find a quadratic polynomial each with the given numbers as the sum and product of its zeroes respectively:

- (a) 3 and 4 (b) -2 and $\frac{3}{2}$ (c) $-\frac{3}{2}$ and 0 (d) $-\sqrt{2}$ and $\sqrt{3}$

Q8. Verify that the numbers given alongside of the cubic polynomials below are their zeroes. Also, verify the relationship between the zeroes and the coefficients in each case.

- (a) $x^3 - x$; 0, 1 and -1
(b) $2x^3 - 5x^2 + x + 2$; 1, 2, and $-\frac{1}{2}$
(c) $3x^3 - 5x^2 - 11x - 3$; 3, -1 and $-\frac{1}{3}$
(d) $6y^3 + 23y^2 - 5y - 4$; -4, $-\frac{1}{3}$ and $\frac{1}{2}$

Q9. Find a cubic polynomial with the sum, sum of product of its zeroes taken two at a time and the product of its zeroes respectively as given below:

- (a) -4, 7 and 0 (b) 5, -2, and -24 (c) -2, $-\frac{8}{3}$ and 0.

Q10. Apply the division algorithm to find the quotient and the remainder on division of $p(x)$ by $g(x)$ as given below:

- (a) $p(x) = -5x^2 + 14x^3 + 9x - 1$, $g(x) = -1 + 2x$
(b) $p(x) = 6x^3 + 11x^2 - 39x - 65$, $g(x) = x^2 + x - 1$
(c) $p(x) = x^4 - 5x + 6$, $g(x) = 2 - x^2$
(d) $p(x) = 3x^3 + x^2 + 2x + 5$, $g(x) = 1 + 2x + x^2$

Q11. Check whether the first polynomial is a factor of the second polynomial by applying the division algorithm:

- (a) $x + 8$, $x^3 + 15x^2 + 56x$
(b) $x - 2$, $x^4 - x^3 + 3x - 9$
(c) $x^2 - 2$, $x^3 - 3x^2 + 5x - 3$
(d) $-5y^2 - 4y + 2$, $15y^4 + 2y^3 - 39y^2 - 16y + 10$