



LOYOLA CONVENT SCHOOL, RANCHI

Durga Puja & Chhath Puja Holiday Homework (2023-24)

Class-X

ENGLISH

Together with textbook

- Unit Assignment-26, 27, 28, 31, 32 (Writing Section)
 - Unit Assignment-53, 54, 63, 74,75 (literature Section)
- Workbook-Unit 8

Project in stick file-Glimpses of India

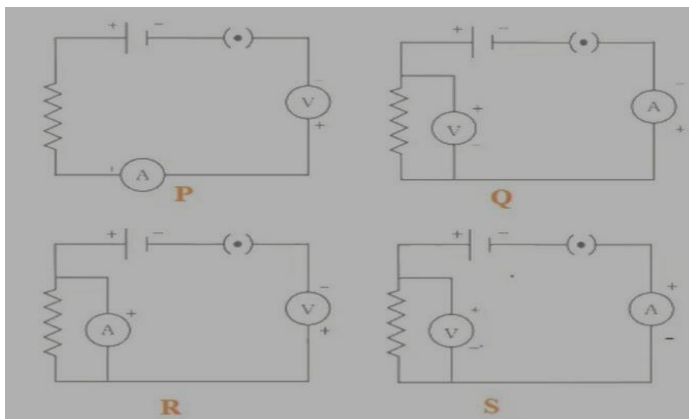
The students can choose any state, write about its culture, Environment, cuisine etc and make a project. It should be creative, informative and colourful. The students need to stick pictures.

MATHEMATICS

1. Lab Manual – Activity – 11, 12, 13, 14, 15.
2. Write all the trigonometric identities with proof.
3. Write all the theorems with proof from the chapter triangles and circles.
4. R S Aggarwal – Ex 4C (Q 11 to 31).
5. R S Aggarwal – Ex 4E (Q 51 to 71).
6. Write a note on difference between similarity and congruency of triangles.

PHYSICS

1. Prepare a chart related to all the formulas of the chapters :
 - a) Reflection of Light
 - b) Refraction of Light
 - c) Electricity
2. Solve the following problems in your holiday homework copy :
 - A. A wire of length 3 m and area of cross-section $1.7 \times 10^{-6} \text{ m}^2$ has a resistance $3 \times 10^{-2} \text{ ohm}$.
 - a. What is the formula for resistivity of the wire and what is the unit of it
 - b. Calculate the resistivity of the wire
 - B. We have four resistors A ,B ,C and D of resistance 4 ohm,8 ohm ,12 ohm and 24 ohm respectively?
 - (i) Lowest resistance which can be obtained by combining these four resistors
 - (ii) Highest resistance which can be obtained by combining these four resistors
 - C. Three resistors 5Ω , 10Ω and 30Ω are connected in parallel with the battery of Voltage $6V$
 - (i) The value of current across each resistor
 - (ii) The value of Potential difference across each resistor
 - (iii) Total current in the circuit
 - (iv) Effective resistance of the circuit
 - D. Which one of the below circuit is properly connected with the electrical components



- E. One – half of a convex lens of focal length 110 cm is covered with a black paper. Can such a lens produce an image of a complete object placed at a distance of 30 cm from the lens? Draw a ray diagram to justify your answer.
- F. The refractive index of some medium are given below:
 - Crown glass- 1.52
 - Water- 1.33
 - Sapphire- 1.77

In which of the medium is the speed of light

 - (i) maximum
 - (ii) minimum
 - (iii) Calculate speed of light in sapphire.
- G. Design an activity using concave mirror to prove that it s converging in nature. Also state a method to find its rough focal length.
- H. Define magnification produced by a spherical mirror in terms of height of a object and image. How is it related to object and image distance? Explain why magnification is positive for virtual image and negative for real image?
- I. A 10 cm tall object is placed perpendicular to the principal axis of a convex lens of focal length 30 cm. The distance of

the object from the lens is 20 cm. Find the:

- (a) Position (b) Nature (c) Size of the image formed.

- J. A divergent lens has a focal length of 30 cm. At what distance should an object of height 5 cm from the optical centre of the lens be placed so that its image is formed 15 cm away from the lens? Find the size of the image also.
3. Write an experiment in your holiday homework copy showing that when an electric current is passed through a conductor placed in a magnetic field, it experiences a mechanical force.

CHEMISTRY

1. Make table -4.1,4.2,4.3 & 4.4 from NCERT book.
2. Discuss the main two allotropes of carbon with reference to their structure and physical properties.
3. Explain the SOAP & DETERGENT with its cleansing action.
4. Do very short answer question (pg -199) & ASSERTION -REASON TYPE question (pg-240) from Vinesh Chemistry.

BIOLOGY

CHAPTER : Life process: ● Do Exercise Q. N. 5, 8, 10, 13

CHAPTER : Control and Coordination ● Do Exercise Q.N. 7, 10, 11, 12

CHAPTER : Our Environment ● Make pictorial flowchart showing i) Food chain in Forest ii) Food chain in pond

CIVICS

- 1) Prepare a project report on: Comparative study of India and any one country from the United States of America/ Australia/Canada/South Africa

The study report to include :

- Meaning of Federalism. ● Why Federalism required in India and the “chosen” country
- Features of Federalism in both—similarities and differences
- Working of Federalism-- Federalism in theory and practice—give examples of center and state relationships and conflict and tension between center and state and state and State
- How successful has federalism been in both the countries?
- Which system—a federal or unitary, do you favour for India? Why?

Pointers-

1. A separate project of 5-8 pages shall be made for all the subjects.
(Acknowledgement, Content, Certificate, Conclusion and Bibliography shall not be a part of the pages mentioned above.)
2. Every project should be put in a stick file.
3. Only Project paper must be used.
4. All the Cover Pages should be handmade. (Computer generated Cover pages shall not be submitted)
5. All duly completed project works should be submitted after Summer Vacation.
6. Only Blue pens shall be used for writing and coloured pens for decoration.

ECONOMICS

Q. Prepare a detailed flowchart showing all the three sectors of the Economy (Primary, Secondary and Tertiary) and explain them with the help of suitable examples.

HISTORY/GEOGRAPHY

1. Prepare a project on 'Lifelines of national economy'.
 - Impact of roadways and railways on the national economy.
 - The challenges faced by the roadways and railways sector in India. ● Globalisation and social groups.
2. " Nationalism spreads when people begin to believe that they are all part of the same nation." Explain with examples.
3. Trace the history of print revolution in India.
4. Why is there a pressing need to use renewable energy resources in India? Explain.
5. On the outline map of India, label- A. Nuclear Power plants (any 6). B. Thermal power plants (any 8).

HINDI

नवयुग हिंदी व्याकरण तथा रचना पुस्तिका के खंड व्याकरण अभ्यास कक्षा X पृष्ठ संख्या 209-231 प्रश्न अभ्यास 1 -12 पुस्तिका में ही लिखें।

SANSKRIT

संप्रेषणात्मक संस्कृतव्याकरण तथा अभ्यास पुस्तिकाया: आदर्श प्रश्न 1-6 खण्ड 'क', 'ख' एवम् ग पुस्तिकायाम् एव लिखत।

ARTIFICIAL INTELLIGENCE

- 1) Write and Explain about the three domains of AI.
- 2) WAP in Python to check if a number is odd or even.
- 3) WAP to find the sum of n natural numbers.
- 4) WAP in Python to find the factors of a number
- 5) WAP in Python to find the largest of three numbers. **NOTE – It should be done in Computer Copy.**