STEPHENS

INTERNATIONAL PUBLIC SCHOOL

Holidays' Homework

Session – 2025-26

Class : 10th

General Instructions:

1. **Use assignment sheets to do all the written work.**
2. **Use a separate file (use A4 sheets) for project and activity work.**
3. **Make separate file for each subject.**
4. **Do your work neatly and beautify it.**
5. **Revise Pre Mid Term Syllabus.**

- **God gives us 24 hours in a day, let us take out a few minutes for Him and thank Him for the happy moments and also ask Him to give us strength to cope up with our difficulties.**
- **Don't be lazy and become a couch potato!! Do exercise and be fit and healthy. Revise all the concepts done in the class.**
- **Reading is fun and it helps us develop our vocabulary. Make it a habit to read story books.**

Subject : English

1. **Chapter Summaries:**
   Read and write summaries in your own words for:
   Chapter 4: From the Diary of Anne Frank
   Chapter 5: Footprints Without Feet
2. **Letter to the Editor**
   (A) You are Karan/Karuna from East Krishna Nagar, Haridwar. Write a formal letter to the editor of National News Uttarakhand about water scarcity in your area and suggest solutions.
   (B) Write a letter to the editor of Jan Chetna magazine, Pune, raising concern over rising road accidents and suggest preventive measures.
3. **Survey on Global Warming:**
   Prepare a questionnaire and interview 10 people about awareness of global warming—its impact and their efforts to tackle it.
4. **Creative Writing:**
   Write an original article/poem/short story reflecting creativity, thoughts or personal experiences. Make sure that the work is self-created and not copied from any source.
   Theme: Celebrating Diversity – Food, dress, festivals around the world

विषय – हिन्दी

1. (क) अपने विद्यालय में होने वाले निःशुल्क स्वास्थ्य शिविर के आयोजन से संबंधित विज्ञापन तैयार करें।
   (ख) 'प्रेरणा कोचिंग सेंटर' के लिए 50 शब्दों में एक आकर्षक विज्ञापन तैयार करें।
2. (क) आप विद्यालय के हिंदी संघ के सचिव हैं। अपने विद्यालय की प्रधानाचार्या को पत्र लिखिए जिसमें पुस्तकालय में हिन्दी की अच्छी पुस्तकें व पत्रिकाएँ मँगवाने के लिए निवेदन किया गया हो।
   (ख) सड़क परिवाहन के प्रबंधक को बसों की दुर्दशा के लिए शिकायती पत्र लिखिए।
3. दिए गए विषय तत्काल प्रस्तुतीकरण के लिए याद करें। **(ASL)**
   (क) साँच बराबर तप नहीं, झूठ बराबर पाप।
   (ख) करत–करत अभ्यास के जड़मति होत सुजान।
   रसरि आवत जात रे, सिल पर परत निशान।
   (ग) यदि मैं देश का प्रधानमंत्री होता तो.....
   (घ) पर्यावरण संरक्षण
   (ङ) परहित सरिस धर्म नहिं भाई अथवा परोपकार
4. पाठय पुस्तक स्पर्श भाग–2 में संकलित सीताराम सेकसरिया द्वारा लिखित गद्य पाठ 'डायरी का एक पन्ना' को पढ़िए एवं स्वतंत्रता आंदोलन एवं स्वतंत्रता सेनानियों के देश प्रेम का वर्णन करते हुए जम्मू व कश्मीर और गुजरात के स्वतंत्रता सेनानियों की सूची तैयार कीजिए। वर्तमान समय में भी भारत अपनी आज़ादी और अस्मिता के लिए संघर्ष कर रहा है। युद्ध एक वैश्विक संकट बन गया है। क्या आपको नहीं लगता कि आज विश्व को युद्ध छोड़कर शांति एवं मैत्री पथ पर अग्रसर होना चाहिए? युद्धोत्तर क्षेत्रों में शांति निर्माण और संघर्ष समाधान को बढ़ावा देना चाहिए। दिए गए संकेत बिंदुओं के आधार पर अपने उत्तर को विस्तृत रूप में 150–200 शब्दों में लिखिए।
   संकेत बिंदु
   - युद्ध के कारण
   - युद्ध से होने वाली हानियाँ (सचित्र प्रस्तुत करें)
   - सुरक्षा उपाय
5. जिसे आप अपना आदर्श मानते हैं और उनके विचारों से आप प्रोत्साहित हुए हैं, उनके विषय में संक्षिप्त रूप में अनुच्छेद लिखें।

Subject : Mathematics

Q1. Find the roots of the quadratic equation $\sqrt{2}\,x^2 + 7x + 5\sqrt{2} = 0$.

Q2. Find the value of k for which the equation $x^2 + k(2x + k - 1) + 2 = 0$ has real and equal roots.

Q3. Find the value of $(x + y)$ from the two equations, $ax + by = a^2 - b^2$, and $bx + ay = 0$.

Q4. Find if the following linear equations are inconsistent or consistent, $3x + 2y = 8$, $6x - 4y = 9$.

Q5. Draw the graph of $2x = y + 3$, $2y = 4x - 6$, and check if the equation has a unique solution.

Q6. Draw the equations on graph paper where the coordinates of the points intersect the lines at the y-axis.

$x + 3y = 6$, $2x - 3y = 12$

Q7. Solve by elimination method: $3x = y + 5$, $5x - y = 11$

Q8. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - x - 4$, find $\alpha\beta - (\alpha + \beta)$.

Q9. $f(x) = x^2 - x - 4$, find the value of $\frac{1}{\alpha} + \frac{1}{\beta} - \alpha\beta$.

If the square of the difference of the zeros of the quadratic polynomial $f(x) = x^2 + px + 45$ is equal to 144, find the value of p.

Q10. Find the value of 'k' such that the quadratic polynomial $x^2 - (k + 6)x + 2(2k + 1)$ has sum of the zeros is half of their product.

Q11. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - p(x + 1) - c$, show that $(\alpha + 1)(\beta + 1) = 1 - c$.

Q12. If the sum of the zeros of the quadratic polynomial $f(t) = kt^2 + 2t + 3k$ is equal to their product, find the value of k.

Q13. Find the zeros of the polynomial $p(x) = 4\sqrt{3}\,x^2 + 5x - 2\sqrt{3}$ and verify the relationship between the zeros and its coefficients.

Q14. Find the largest number which divides 245 and 1029 leaving remainder 5 in each case.

Q15. A shopkeeper has 120 litres of petrol, 180 litres of diesel and 240 litres of kerosene. He wants to sell oil by filling the three kinds of oils in tins of equal capacity. What should be the greatest capacity of such a tin?

Q16. Find the greatest number of 6 digits exactly divisible by 24, 15 and 36.

Q17. There are 144 cartons of coke can and 90 cartons of Pepsi can to be stacked in a canteen. If each stack is of the same height and is to contain cartoons of the same drink, what would be the greater number of cartons each stack would have?

Q18. A dealer sells a toy for ₹24 and gains as much percent as the cost price of the toy. Find the cost price of the toy.

Q19. Find the value of k for which the following pair of equations has no solution:
$3x + y = 1$ and $(2k - 1)x + (k - 1)y = 2k + 1$

Q20. If $2x + y = 23$ and $4x - y = 19$, then find the value of $(5y - 2x)$ and $\left(\frac{y}{x} - 2\right)$.

Project:-

PYTHAGORAS THEOREM This theorem states that the square of hypotenuse is equal to the sum of squares on the other two sides.

Also find the necessary and sufficient conditions for any three numbers to be sides of a triangle and further show under what circumstances the triangle must be a right.

Activity:- To find the conditions for consistency and inconsistency for a pair of linear equations.

Subject : Science

PHYSICS

Section – A (Numericals)

Q1. A wire of length 3 m and area of cross-section 1.7×10^{-6} m^2 has a resistance 3×10^{-2} ohm.

(a) What is the formula for resistivity of the wire?

(b) Calculate the resistivity of the wire.

Q2. The table given below shows the resistivity of three Material X, Y and Z.

Samples	X	Y	Z
Resistivity	3×10^{-9}	11.1×0^{-6}	18×10^{-17}

(a) Arrange the samples in increasing order of conductivity.

(b) Which of these is best conductor?

(c) Which of these is best insulator?

Q3. There are *m* resistors each of resistance R. First they all are connected in series and equivalent resistance is X. Now they are connected in parallel and equivalent resistance is Y. What is the ratio of X and Y?

Q4. We have four resistors A, B, C and D of resistance 4 Ω, 8 Ω, 12 Ω and 24 Ω respectively.

1	**Lowest resistance which can be obtained by combining these four resistors.**	
2	**Highest resistance which can be obtained by combining these four resistors.**	

Q5. Three resistors 5 Ω, 10 Ω and 30 Ω are connected in parallel with the battery of voltage 6V.

S.No.	Questions	
1	**The value of current across each resistor.**	
2	**The value of Potential difference across each resistor.**	
3	**Total current in the circuit.**	
4	**Effective resistance of the circuit.**	

Q6. An electric bulb draws a current of 8 A and works on 250 V on the average 8 hours a day.

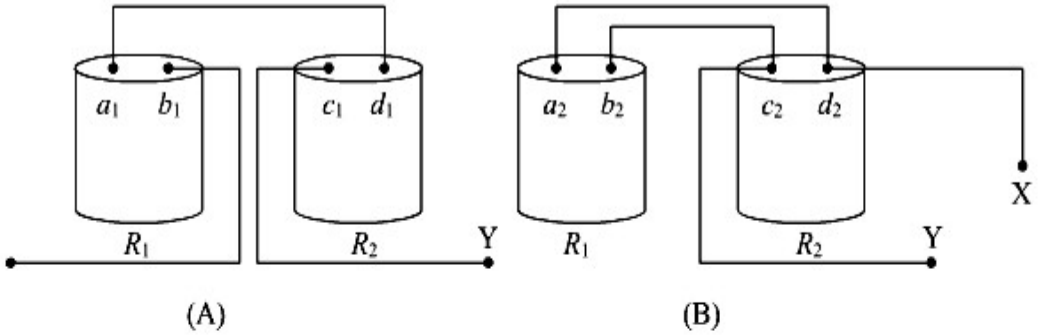
(a) Find the power consumed by the bulb.

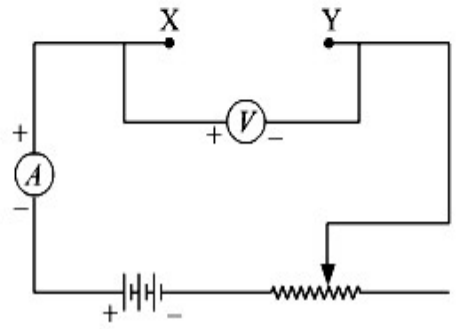
(b) If the electric distribution company changes ₹ 5 for 6 KWh, what is the monthly bill for 60 days?

Q7. Give the formula for each

1	**Ohm's Law.**	
2	**Resistance in terms of Length, Area, resistivity.**	
3	**Current in terms of Resistance and Voltage.**	
4	**Equivalent Resistance for Resistors in Series.**	
5	**Equivalent Resistance for Resistors in Parallel.**	
6	**Power produced in the resistance.**	

Q8. Two students (P) and (Q) connect their two given resistors R_1 and R_2 in the manners shown below:





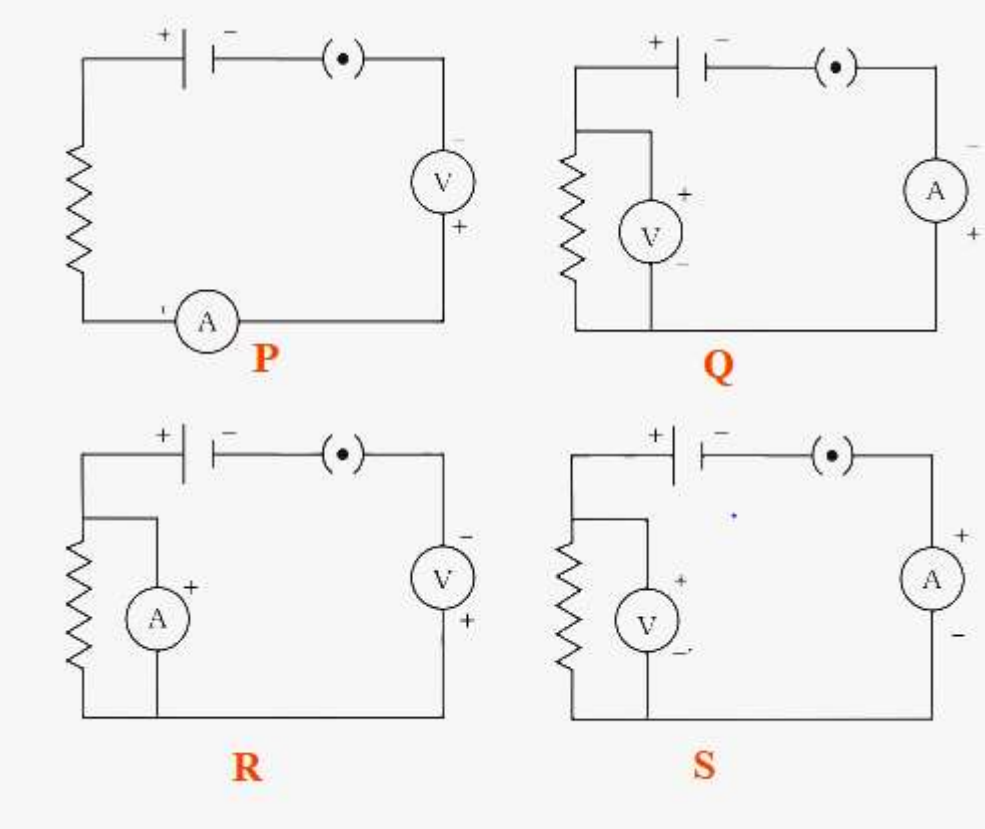
Student (P) connects the terminals marked (b_1) and (c_1) while student (Q) connects the terminals marked (d_2) and (c_2) in their respective circuits at the points marked X and Y. Which one of the following is correct in relation to the above arrangements?

(a) both the students will determine the equivalent resistance of the series combination of the two resistors.

(b) both the students will determine the equivalent resistance of the parallel combination of the two resistors

(c) student (P) will determine the equivalent resistance of the series combination while student (Q) will determine the equivalent resistance of the parallel combination of the two resistors.

Q9. Which one of the below circuits is properly connected with the electrical components?



(a) P
(b) Q
(c) R
(d) S

Q10. Judge the equivalent resistance when the following are connected in parallel:
(a) 1 Ω and 10^6 Ω
(b) 1 Ω, 10^3 Ω and 10^6 Ω

Q11. How can three resistors of resistances 2 Ω, 3 Ω and 6 Ω be connected to give a total resistance of (a) 4 Ω, (b) 1 Ω?

Q12. What is (a) the highest and (b) the lowest total resistance that can be secured by combinations of four coils of resistances 4 Ω, 8 Ω, 12 Ω, 24 Ω?

Section – B (Practicals)

(a) Ohms law (to plot a graph between potential difference and current and hence find the value of resistance).

(b) To study the refraction of light through a prism and …….. the angle of incidence, refraction, emergence, deviation.

Note: Section B will be written in the lab manual as instructed during the class.

CHEMISTRY

Q1. Make a flow chart of valency of the polyatomic and mono atomic ions.

Q2. Make a flow chart of electronic configuration, atomic number, atomic masses and valency of first 20 elements

Q3. Make a 3D model of any one of the following molecules:-

(a)	Methane	(b)	Ethane
(c)	Ethene	(d)	Carbon dioxide
(e)	Water	(f)	Ammonia

Q4. Make a flow chart on indicators to distinguish between acidic and basic solution (natural and synthetic indicator)

Q5. EXPERIMENT – 1

To determine the pH of acidic and basic solution

0.01 M acetic acid

0.01 M NaOH solution

0.01M HCl solution

0.01M Mg $(OH)_2$

Note:- Write down the experiment on the pratical file.

BIOLOGY

Section – A

ASSIGNMENTS

1. **Diagram labeling:** Label diagrams of human digestive, respiratory, circulatory, and excretory systems.
2. **Process explanations:** Explain the processes of photosynthesis, respiration, and transpiration.
3. **Nutrient importance:** Research and write about the importance of essential nutrients (carbohydrates, proteins, fats, vitamins, and minerals).

Section – B

PROJECTS

1. **Human body system model:** Create a 3D model of one of the human body systems (digestive, respiratory, circulatory, or excretory).
2. **Plant processes:** Create a poster illustrating the processes of photosynthesis and transpiration.
3. **Healthy habits:** Design a poster/leaflet on healthy habits for maintaining proper bodily functions.

Section – C

ACTIVITIES

1. **Observations:** Observe and record the rate of transpiration in plants under different conditions.
2. **Healthy diet planning:** Plan a balanced diet for a week, considering nutritional requirements.

Section – D

EXPERIMENTS

Exp. No. 1 To study leaf peel to show stomata

Exp. No. 2 Show Carbon dioxide is given out respiration

Exp. No. 3 To study binary fission in Amoeba, Budding in yeasts and hydra.

Exp. No. 4 To study different parts of embryo of divot seed(pea, gram , Red kidney bean.

NOTE: Section D should be written only in lab manual as instructed.

Subject : Social Science

A. General Questions:-

Q1. Write a newspaper report on
- (a) Jallianwalla Baga Massacre
- (b) The Simon Commission

Q2. List all the different social groups which joined the Non-Cooperation Movement of 1921. Then choose any three and write about their hopes and struggles to show why they joined the movement.

Q3. Find out about the participants in the National Movement who were captured and put to death by the British. Paste their pictures in your file.

Q4. Mark and locate the following on the map of India.
- (a) A place where the Congress Session was held in 1919.
- (b) A place where the Congress Session was held in 1920.
- (c) A place associated with the cotton mill workers Satyagraha.

Q5. Prepare a short report on
Case study of Grameen Bank of Bangladesh

Q6. Prepare a detailed report on SHG's.

B. Project Work

1. Prepare a detailed project report on any one of the following topics:-
   - (a) Consumer Awareness
   - (b) Social Issues
   - (c) Sustainable Development

Subject : Information Technology

Practical Title: Student Database Management

Tools Used:

- **MySQL** (Libre Office Base)

INSTRUCTIONS:

- Create a database name student Record
- Create a table in database using Fields:- Roll No, Name, Class, Section, Marks, Attendance(%)
- Enter the values of the fields as sample Record
- Analyse the data and find the Top Performer, Lowest attendance, Average marks, Students with attendance less than 90%

Note:-Take print out of all the pages and compile it in a folder. Design an attractive cover for your file / folder.

Subject : Art

- **Make a picture of nature on canvas and then laminate it.**