

SAINIK SCHOOL REWA (MP)
HOME ASSIGNMENT FOR SUMMER VACATION : 2022-23
CLASS - VI

Computer	Draw a block diagram of computer and explain in detail	
Science	List of Plants and Animals Product can be used as Food.	
English	One Page Writing Daily. Article	
Hindi	(1) सुलेख रोज एक पृष्ठ, (2) बसन्त भाग-1, (3) पाठ-1, 2	
Sanskrit	(1) सुलेख संस्कृत एक पृष्ठ प्रतिदिन, (2) अकारान्त पुल्लिङ्ग, (3) अकारान्त स्त्रीलिङ्ग	
Mathematics	Write Multiplication Table from 01 to 20. Define : Even, Odd and Prime numbers. Draw different types of triangle.	
Social Science	(1) Describe the Parliamentary System in India, (2) Describe the Solar System with Diagrams.	

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CLASS - VII

Computer	Make a collage of computer configuration / advertisement	
English	(1) One Page Writing Daily, (2) Literature-2 Lesson, (3) Supplementary-2 Lesson	
Hindi	(1) सुलेख एक पृष्ठ रोज, (2) बसन्त भाग-2, पाठ 1-5, (3) व्याकरण-ग्रीष्मकालीन अवकाश पर निबन्ध	
Sanskrit	(1) सुलेख संस्कृत प्रतिदिन एक पृष्ठ, (2) कारकम्, (3) पंच संस्कृत कथा, (4) पाठ-1 व पाठ-2	
Mathematics	(1) Make a Magic square using Integers / Fractional Nos, (2) Draw a Circle, Divide it into 24 equals, Parts / Fraction. (3) Calculate and Write measure of each fraction in degrees.	
Social Science	(i) Summarise learn and also write question & answers. (ii) History Chap-1, 2, 3, (iii) Civics Chap-1, 2, (iv) Geography Chap-1, 2, 3	
Science	(1) Chap-1 to 3 Exercise, (2) Chap-03 Fibre to Fabric (Activity 3.3) (3) Project-02, Page No.22, Chapter-02.	

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CLASS – VIII

Computer	Create a web page in html about Sainik School Rewa	
English	(1) Write at least 05 new headlines daily, (2) Write at least 10 paragraphs on the topic of your choice. (3) Write present tense, past tense and past participle form of at least 100 verbs.	
Hindi	(1) सुलेख एक पृष्ठ रोज, (2) बसन्त भाग-3, पाठ-1 एवं पाठ-2 का प्रश्नोत्तर अभ्यास लिखकर याद करें तथा भारत की खोज का पाठ-1 एवं 2 का प्रश्नोत्तर अभ्यास लिखकर याद करें। (2) व्याकरण-वर्ण विचार (स्वर, व्यंजन की परिभाषा, उनके प्रकार एवं उदाहरण लिखकर याद कीजिए।	
Sanskrit	(1) प्रतिदिन एक सुलेख संस्कृत, (2) दस संस्कृत श्लोक, (3) पाठ-1, पाठ-2 (4) पंच (5) संस्कृत कथा	
Mathematics	(1) Write summary of Chapter 1 & 2, (2) Write the properties of Rational numbers	
Social Science	Summarise, learn and also write Question & Answers (1) History : Chap-1, 2, (2) Civics : Chap-1, 2, (3) Geography : Chap-1, 2	
Science	Solve exercise of Chapter-2, 3, 4, 5 of NCERT Book.	

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CLASS – IX

Computer	Python Program – Make a Calculator in Python.	
English	(1) Write at least 10 descriptive paragraphs of your own choice in 150-200 words, (2) Write at least 10 diaries on 200-250 words, (3) Write at least 10 stories of your own choice in 250-300 words each.	
Hindi	(1) सुलेख रोज एक पृष्ठ, (2) क्षितिज : पाठ-1, 2, 3 (गद्य व पद्य), (3) व्याकरण- निबंध 10, पत्र-10, उपसर्ग, प्रत्यय, वाक्य भेद (4) अपठित पद्यांश-15	
Mathematics	(1) Make a square root spiral, (2) Write the summary of Ch-1 & 2, (3) Do examples of Chapter 1 & 2	
Science	(1) Solve Exercise / Numerical problems of Chapter: Motion and Force and laws of Motion, (2) Chemistry : Solve Exercise of Chap-01 & 02, Matter in our surroundings and is matter around. (3) Biology : Solve the exercise of Chapter-1 (Cell) and Draw the figure cell organelles	
Social Science	Summarise : Learn and also Write Questions & Answers (1) History : Chapter-1, 2, (2) Civics : Chapter-1, 2 (3) Geography : Write a short paragraph on all the drainage basin on India	

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CLASS – X

Computer	Create a web page and host on free server. Topic – Sainik School Rewa	
English	(1) Write at least 10 format letters of your own choice in 100-120 words, (2) Write at least 10 analytical paragraphs in 100-120 words, (3) Write at least 100 irregular verbs in present tense, past tense and past participle form.	
Hindi	(1) सुलेख एक पृष्ठ रोज, (2) क्षितिज-गद्य/पद्य-1, 2, 3 (3) व्याकरण – निबंध-10, पत्र-10, रस, अलंकार, (4) अपठित पद्यांश-15	
Mathematics	(1) Write a system of linear equation in 2 variables and represent it graphically, (2) Draw graph of Quad, Polynomial $x^2 + x + 1$ (3) Write summary of Chapter-1, 2 & 3.	
Science	(1) Physics : Solve exercise / Numerical problems of chapters – Light refraction and reflection, Human eye and colourful world. (2) Chemistry : Solve exercise of chapter-1 & 2 Chemical Reactions & Equation and Acids bases & salts. (3) Biology : Solve the exercise Chap-1 (Life processes) (4) Draw the all figure : Lungs, heart, Kidney & Digestive System	
Social Sc.	(1) History : Chapter-1, (2) Civics : Chapter-1, Questions & Answers; (2) Geography : Describe the major minerals (iron ore) producing areas of India.	

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CLASS – XII

Computer	Design and code a project in Python. The list of few projects are – (a) Simple Calculator, (b) IT Calculation, (c) Small Shop Management, (d) Games	
Mathematics	Study and Solve following chapters : (1) Matrices, (2) Differentiability, (3) Continuity, (4) Inverse Trigonometric Functions	
Chemistry	(1) Solutions and Colligative Properties, (2) Type of Solutions, (3) Numericals on molarity, molality, number of moles, normality	
Biology	(1) Draw all the Diagrams present in Unit-I, (2) Write down the NCERT Questions and Answers of Unit-I	
Physics	(1) Exercise of Electrostatic, (2) Home Assignment given to all cadets on electrostatic.	
English	(1) Write 100 Antonyms and Synonyms, (2) Write 50 Idioms and Phrases with meaning and make one sentence with each, (3) Write 50 questions of error spotting.	

For class 12 Physics, Chemistry and Mathematics, CBSE content can be viewed on:

<https://www.youtube.com/channel/UCG7qv69PhtZlwDzB2vTWzKQ/videos>

For classes 11 and 12 NIOS content can be viewed on:

<https://www.youtube.com/channel/UC6R9rl-1iEsPCPmvzlunKDg/videos>

For classes 11 and 12 Physics from SWAYAM Portal

https://ciet.nic.in//swayam_physics03.php For (XII)

https://ciet.nic.in//swayam_physics01.php (For XI)

Holiday Home work for Class XII Physics

1. Deduce the expression for electrical energy density of a capacitor.
2. A 800 Pf capacitor is charged by a 100V battery. After some time the battery is disconnected. The capacitor is then connected to another uncharged 800Pf capacitor. Find the loss or gain in energy of the combination.
3. State Gauss theorem in electrostatics. Obtain the expression for electric field at a point due to an infinitely long thin uniformly charged straight wire of linear charge density λ Cm⁻¹.
4. Two point charges 6 μ C and -2 μ C are separated by a distance 1m in air. Calculate at what point on the line joining the two charges is the electric field zero?
5. A hollow metallic sphere of radius 5cm is charged such that potential at its centre is 20V. What is the potential on its surface?
6. Establish the expression for electric potential due to an electric dipole at any point. Deduce the electric potential at a point on its axial line from it.
7. (i) Explain that the electric dipole experience no translational motion rather it execute rotational motion when placed in a uniform electric field. Derive the expression for torque acts on it.
(ii) Calculate the amount of work done in rotating a dipole of dipole moment 3×10^{-8} Cm from its position of stable equilibrium to the position of unstable equilibrium in a uniform electric field of intensity 104 N/C.
8. (i) Draw the equipotential surface for a system of charges +q and -q.
(ii) Write two characteristics of equipotential surface.

(iii) Find the electric potential energy of the system of four charges $2C, -3C, 5C$ and $-5C$ placed at the corners of a square of sides 10cm .

9. Derive the expression for the electric potential at any point along the axial line of an electric dipole?

10. Using Gauss law, derive an expression for the electric field intensity at any point outside a uniformly charged thin spherical shell of radius R and charge density $\sigma \text{ C/m}^2$. Draw the field lines when the charge density of the sphere is (i) positive, (ii) negative.

11. A uniformly charged conducting sphere of 2.5 m in diameter has a surface charge density of 100 mC/m^2 . Calculate the (i) charge on the sphere (ii) total electric flux passing through the sphere.

12. Derive an expression for the torque experienced by an electric dipole kept in a uniform electric field.

13. Calculate the work done to dissociate the system of three charges placed on the vertices of a triangle of side 10cm . Here $q = 1 \text{ micro Coulomb}$.

14. A parallel plate capacitor is charged by a battery. After some time the battery is disconnected and a dielectric slab of dielectric constant K is inserted between the plates. How would (i) the capacitance, (ii) the electric field between the plates and (iii) the energy stored in the capacitor, be affected? Justify your answer.

15. Use Gauss's law to derive the expression for the electric field between two uniformly charged large parallel sheets with surface charge densities q and $-q$ respectively.

16. A charge $+Q$ is placed on a large spherical conducting shell of radius R . Another small conducting sphere of radius r carrying charge ' q ' is introduced inside the large shell and is placed at its centre. Find the potential difference between two points, one lying on the sphere and the other on the shell.

17. How would the charge between the two flow if they are connected by a conducting wire? Name the device which works on this fact.

18. Solve the numerical from NCERT from chapter 1 and 2.

19. What is the work done in moving a test charge q through a distance of 1 cm along the equatorial axis of an electric dipole?

20. What is the electrostatic potential due to an electric dipole at an equatorial point?