



SAINIK SCHOOL REWARI
SUMMER VACATION WORK (2024-25)
CLASS -XII

Instructions to be followed for cadets:

1. Do all the Vacation Work in one Notebook only.
2. Do the work in notebook in a sequence as mentioned below: -
English, Maths, Physics, Chemistry, Bio/Computer
3. Vacation Work should be done neatly and efficiently. It will be duly marked as a part of your assessment.
4. Any additional chart paper/Map /Model if any required in vacation work, should be submitted separately along with vacation work note book.
5. Do not get up late. Rise at the usual time. Read newspaper. Keep yourself updated. Reading from colourful illustrated story books will develop your language skills.
7. Assign a permanent workplace and a work-time. This brings in discipline in your life. If there is a subject you are weak in, try and work on improving that weakness. You will be more confident when you go back to school.
8. Inculcate good manners – 4 magic words `Please, thank you, excuse me, Sorry' – Use them and see the difference.
9. Do not spend time playing video games or using the smart phone, they tend to numb your senses, try playing scrabble or chess. Your vocabulary as well as concentration power will improve.

ENGLISH

1. Comment upon the theme of “ Linguistic Chauvinism” as presented in the chapter “ The Last Lesson” in 120-150 words. Give specific textual instances.
2. Compare and contrast the plight of Saheb and Mukesh from “ Lost Spring: Stories of Stolen Childhood”.
3. Write down a critical appreciation of the poem “ My Mother at Sixty Six”.
4. Write five new words of your choice daily in your notebook, with their meaning in English and write down a sentence on your own with them. Maintain record of words date-wise without fail.
5. Read at least two works of fiction/ non fiction of your choice and write their review.
6. Write five letters to the editor (giving suggestions or opinion on issues of public interest).
7. Write the report for function, event or incident (descriptive and analytical in nature) for the school magazine and the newspaper (three each).

MATHEMATICS

1. Solve the 08 question papers of UPSC NDA OF MATHEMATICS of following years:-
 - (a) 2024 I
 - (b) 2023 II
 - (c) 2023 I
 - (d) 2022 II
 - (e) 2022 I
 - (f) 2021 I
 - (g) 2021 II
 - (h) 2020 II
2. Learn formulae of Differentiation, Integration and Properties of Matrices and Determinants & Trigonometric functions. Also make a pocket Diary on formula of above topics.
3. Solve the following chapters of NCERT and make mind map of following chapters:-
 - (i) Relations and Functions
 - (ii) Inverse Trigonometric Functions
 - (iii) Matrices
 - (iv) Determinants
 - (v) Continuity and Differentiability
 - (vi) Applications of Derivatives
4. Project on finding the Coordinate of different points identified in your study room using the concept of Three-dimensional geometry and also find distance between the identified points.

Do the following activities in an activity file :-

5. To sketch the graph of a^x and $\log_a x$, $a > 0, a \neq 1$ and to examine that they are mirror images of each other.
6. To verify that the relation R on the set L of all lines in a plane defined by $R = \{(l, m) : l \perp m\}$ is not an equivalence relation.
7. To find analytically the limit of a function $f(x)$ at $x = c$ and also check the continuity of the function at that point. Consider the function:

$$F(x) = \begin{cases} \frac{x^2-4}{x-2}, & x \neq 2 \\ 6, & x = 2 \end{cases} \quad \text{Check its continuity at } x=2$$

CHEMISTRY

1. Solve NCERT questions of Unit I and Unit II in notebook.
2. Solve Chemistry questions of previous 10 years NDA question papers in notebook.
3. Prepare mind maps of following NDA Chemistry topics:
 - a) Matter and its classification
 - b) Laws of chemical combinations and Mole Concept.
 - c) Structure of atom.
 - d) Acid, base and salts.
 - e) Carbon and its compounds.
 - f) Oxidation and Reduction.
 - g) Metals and Nonmetals.
4. Prepare notes of following class XII chemistry topics
 - a) Solution
 - b) Electrochemistry
5. Prepare a project on foaming capacity of different samples of soap.

BIOLOGY

1. Prepare a project on any one topic
 - (a) Biodiversity conservation
 - (b) Sexually transmitted Diseases
 - (c) Various techniques used in IVF/Test tube baby programmes.
2. Prepare a list of biologists and their contribution, who got Noble prize in medicine in last five years.
3. To solve all the questions asked in NEET 2024 from the chapter 1, 2, 3 and 4.
4. Prepare a chart on A4 Sheet about various human diseases, their causal organism and their symptoms.
5. To solve UPSC (NDA) questions of biology asked in last 10 years in the notebook.

PHYSICS

1. Make notes, do previous years Board questions and NCERT questions of chapters 1 and 2.
2. Solve Physics questions of last five years NDA GAT question papers.
3. Prepare mind map of first two chapters.

COMPUTER SCIENCE

1. Using Text File / Binary File handling, create a short project in python on Student information Record system with following data :-
 - (a) Roll No
 - (b) Name
 - (c) Class & Section
 - (d) House
2. Project should have the following details of:
 - (a) Addition of new record
 - (b) Deletion of any specific record
 - (c) Search of specific record based on roll no .
 - (d) Display Housewise details

Student will submit the project in soft copy only in a Pen drive. The pen drive of cadet will return back after assessments of project.