



SAINIK SCHOOL REWARI
DIWALI VACATION HOMEWORK (2019-20)
CLASS – IX

Instructions to be followed by Cadets:

1. Do the entire Vacation Work in one Notebook only.
2. Do the work in notebook in a sequence as mentioned below:-
 - (a) English, Hindi, Maths, Science, Social Studies for classes VI –X
 - (b) English, Maths, Physics, Chemistry Bio/Computer for classes XI-XII
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 and go for a morning walk, or play a game that interests you. Talk about things you see around. Plan some outdoor and indoor games. Spend some time on a hobby.
6. Read newspaper. Keep yourself updated. Reading from colorful illustrated story books will develop your language skills. Listen to stories from family members and try to narrate the stories you have read from various story books.
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.

ENGLISH

1. Write two business letters:
 - (a) To the publisher requesting to send the books for the school library.
 - (b) To the Sports Good Manufacturer requesting to send the sports items to the school.
2. Write two letters to the Editor of a newspaper on:
 - (a) Shortage of electricity and regular power cuts in your locality
 - (b) Problem of stray dogs and cattle in your locality
3. Write two articles on social issues like:
 - (a) Child Marriage
 - (b) Dowry System
4. Write two stories giving it the appropriate heading
5. Revise Unit 6,7 and 8 of main reader along with poetry section
6. Read newspaper daily and write five headlines on current topics.
7. Write at least five new words and their meanings.

हिन्दी

1. किसी एक ऐतिहासिक या प्राकृतिक स्थान का भ्रमण करें व कक्षा में उसे सुनाएँ।
2. महात्मा गांधी अपनी वेशभूषा के प्रति एक अलग सोच रखते थे इसके पीछे क्या कारण रहे होंगे अपने शब्दों में लिखें।
3. मातृभूमि : ए विलेज विदाउट विमेन' वर्ष 2005 में रिलीज इस फिल्म को यू ट्यूब पर देखें और निर्देशक मनीष झा ने इस फिल्म में कन्या भ्रूण हत्या कि जो त्रासदी बताई है उसके बारे में संक्षेप में लिखें।
4. स्वतंत्रता सेनानियों के नाम और उनसे संबद्ध जेलों के नाम लिखकर उनके चित्रों के साथ चार्ट पर प्रदर्शित करें।
5. महादेवी वर्मा द्वारा रचित संस्मरणों एवं रेखाचित्रों को पढ़ें।
6. पूरक पुस्तक कृतिका में दी गई एकांकी रीढ़ की हड्डी को पढ़ें और लिखें कि आज समाज को किस प्रकार के युवाओं की जरूरत है ?

MATHS

1. Prepare the following charts + projects + models (any 2 from each section totaling to 6)

Models

- (a) To prepare model of Number System.
- (b) To make spiral of $\sqrt{7}$ by using thread.
- (c) Relate polynomial to daily life
- (d) Mathematical Painting using tangrams
- (e) To design games of chance (using cards)
- (f) To show the area of a circle.
- (g) Surface area of right circular cylinder.
- (h) To show the criteria for congruency and similarity.
- (i) Design a crossword puzzle related to Mathematical concepts.
- (j) To prepare wind chimes by using Mathematical shapes.

Projects

- (k) Origin and development of Number System.
- (l) Concept of Rational and Irrational numbers.
- (m) Historical details of zero
- (n) Requirements of zero
- (o) Evaluation in various civilizations
- (p) Importance of zero
- (q) Projects on branches of Maths.
- (r) (i) Algebra (ii) Geometry (iii) Architecture (iv) Music
- (s) Polynomial
 - (i). Some important mathematical problem related to identity e.g. $(-12)^3 + (5)^3 + (7)^3$
 - (ii). Quick technique to calculate the square of any no (less than 100) ending with digit 5.
 - (iii). To make 10 one word question related to polynomial
- (t) To investigate on male female ratio over generation and interpret it by using bar graph.
- (u) Mathematics behind metro routes.
- (v) Mathematics through newspapers.
- (w) Development of mathematics Apps.

Charts

- (x) Algebraic Identities
 - (y) Formulae related to Surface area and volume.
 - (z) Kinds of Quadrilaterals with properties.
 - (aa) Compound interest (cp,sp.loss, profit etc.)
 - (bb) Euclid's Axioms and Postulates
 - (cc) Angle subtended by arcs in the same segment are equal.
 - (dd) Area of Parallelogram using graph paper
2. Complete first four exercises of AREAS OF PARALLELOGRAMS & TRIANGLES from RD SHARMA TEXT BOOK.

SCIENCE (PHYSICS)

1. What advantages does a graph have over a table having the same information in the form of numbers?
2. How does uniform linear motion differ from uniform circular motion? Give two points of differences.
3. A racing car has an acceleration of 4 m/s^2 . What distance will it cover in 20 seconds after the start?
4. A particle initially at rest, moves with an acceleration 5 m/s^2 for 5 s. Find the distance travelled in (a) 4 s, (b) 5 s and (c) 5^{th} seconds.
5. Differentiate between acceleration and velocity.
6. At the end of a race, a runner decelerates from a velocity of 9 m/s at a rate of 2 m/s^2 .
 - (a) How far does he travel in the next 5 s?
 - (b) What is his final velocity?
 - (c) How much time will it take to finally stop?
7. A body moving with uniform acceleration travels 84 m in the first 6 s and 180 m in the next 5s. Find: (a) the initial velocity, and (b) the acceleration of the body.
8. A body moves from rest 270 m in 3 s. Find the velocity of the body at 10 s after the start.

9. The driver of a moving car suddenly sees ahead a very old man on the middle of the road. To save the old man he applies the brake, which produces an acceleration of 4 m/s^2 in opposite direction to the motion. After 3 seconds car comes to rest.
- Calculate the initial velocity and distance travelled by the car.
 - If the man is 20 m away from the car, would the driver succeed to save the old man? Explain by calculation.
 - What value does the car driver show?
10. Make a working model of physics. Explain the principle on which model works.
11. Write down the five real life situation in which Newton's laws of motions are applied.

CHEMISTRY

- Define atomicity.
- Write the atomicity of the following molecules:
 - Sulphur
 - Phosphorus
- What is an Ion? Give examples.
- Give an example of a triatomic molecule of an element.
- Write the symbols of the elements from atomic no. 1 to 20.
- Why is it not possible to see an atom with naked eyes?
- Classify each of the following as a physical or a chemical change. Give reasons.
 - Drying of a shirt in the sun.
 - Rising of hot air over a radiator.
 - Burning of kerosene in a lantern.
 - Change in the colour of black tea on adding lemon juice to it.
 - Churning of milk cream to get butter.
- What is the difference between an atom and a molecule.
- Draw neat diagrams of distillation, chromatography and sublimation and also label it 101
- Learn all the NCERT question answers of chapter-2 of chemistry.

BIOLOGY

- Make a project report on diseases and their herbal remedies.
- Practice questions from other reference books on the chapter done in the class

SOCIAL SCIENCE

GEOGRAPHY

- What is Bio diversity? Describe the salient features of India's biodiversity heritage.
- What are the important factors that affect population density of India?
- Watch weather news updates and reports on news channels and newspapers regularly and prepare a summary report.
- Prepare the map of India on full size chart paper depicting the following themes. (Use separate chart for different theme)
 - India- Mean annual temperature
 - India- Mean annual rainfall
 - India- Physical relief
 - India- Drainage
 - India- Political Map with boundaries.

ECONOMICS

1. Collect the latest data of hunger and starvation status in India.
2. What do you mean by food security? Suggest some measures to achieve food security.

POL. SCIENCE & HISTORY

1. Make a project report on the powers and functions of the followings:
 - (a) President of India.
 - (b) Prime Minister of India.
 - (c) Chief Justice of India.
 - (d) Chief Election Commissioner of India
 2. Learn and write ch.1, 2 & 3 of history and ch.02, 03 & 04 Pol.Sc.
 3. Write a detailed note on the following:
 - (a) French Revolution
 - (b) Russian Revolution
 - (c) Nazism and rise of Hitler
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