

VACATION HOME WORK

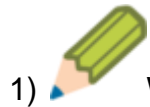
CLASS XI

MATHEMATICS

FROM THE FOLLOWING CHAPTERS SOLVE 10 MULTIPLE CHOICE QUESTIONS WITH EXPLANATION.

1. PROGRESSIONS
2. TRIGONOMETRY
3. STATISTICS
4. PROBABILITY
5. COORDINATE GEOMETRY

ENGLISH



1) Write a *diary entry* on _'a day in lockdown'_ . (200 words)



2) write a *letter to a friend* who is stranded in our school suggesting him activities he can get involved to keep himself healthy and sound.



3) Write an *essay* on how the 21 day lockdown period changed the way you and your family lived. (500 words)

* you may include the innovative ideas (jugaads) adapted.

* the improvement in family bonding

* better understanding of each other.

* adjustments made to cope up with the crisis etc.

CLASS – XI – Chemistry

1. Write the details of atoms with atomic numbers 1 – 30 in the following format:

Sl.No	Name of the element	Symbol	Atomic Number	Atomic Mass(g)

2. Write electronic configurations of elements form 1 – 30
3. Read the chapter on classification of elements and answer all the questions in the exercise.
4. Read the chapter no 14 – Environmental Chemistry and answer all the questions in the exercise.
5. Read the chapter Some basic principles of organic chemistry and write the IUPAC name of various functional groups with 5 examples each.

PHYSICS

DOWNLOAD THE CONTENT OF NCERT TEXT BOOK AND READ THE FOLLOWING CHAPTERS

OR

IN ANDROID MOBILE PHONE DOWNLOAD THE APP NAMED” NCERT BOOKS AND SOLUTIONS” AND EXPLORE THE FOLLOWING CHAPTERS OF PHYSICS CLASS – XI

Elementary concepts of differentiation and integration for describing motion.

Use the formula :

1. For $y = ax^n + c$, $\frac{dy}{dx} = anx^{n-1}$

2. $\int x^n dx = \frac{x^{n+1}}{n+1} + C$ for integration without limit

3. $\int_a^b x^n dx = \frac{a^{n+1}}{n+1} - \frac{b^{n+1}}{n+1}$ for integration with limit

Activity – 1 : Elementary concepts of integration for describing motion.

1. Differentiate the followings with respect to 'x'.
- (i) 2004 (ii) e^{-1} (i) π^2
2. Differentiate the followings with respect to 'x'.

(i) x^6 (ii) $\frac{1}{x^3}$ (iii) \sqrt{x}

3. Differentiate the following expression: $4x^3 - 3x^2 + \frac{4}{x^2} - 8$

4. Differentiate $(4x+2)(5x^2+4)$ with respect to 'x'.

5. Differentiate the following with respect 'x'. (i) $\sqrt{1+2x^2}$

6. Differentiate the following with respect 'x': (i) $\sin x^3$

(ii) $(3x^2+4)^3$
(ii) $\cos(ax+bx+c)$

7. Differentiate $v = \frac{t^3}{3} + \frac{2}{t^2} + 1$ with respect to 't'.

8. Differentiate the following with respect to 'x' and find the value when x = 9.

(i) $\sin x$, (ii) $\tan 5x$, (iii) $\cos \sqrt{x}$

9. If $x = at^3$ and $y = bt^2$, find $\frac{dy}{dx}$.

10. Differentiate the following with respect to 'x': $\frac{x^2+1}{x+1}$

Computer Science

1. Write about Tokens of C programming language with examples.
2. Draw flowchart components and explain its functionality
3. What do you understand by the terms Sequence, selection and iteration constructs
4. What are the different types of malicious programs that can infect computer?
5. Draw the functional units of computer and explain the functions of each unit
6. Define : cloud computing, networks, IoT, blockchain, software, hardware