

NAV JEEWAN MODEL SR. SEC. SCHOOL

Dear students,

We want to extend our best wishes to each and every one of you. We hope that you and your loved ones are well and safe and that you are finding meaningful ways to spend your time during social distancing. The school is certainly feeling the loss of your presence, and hopefully we will overcome this period of isolation soon. Regardless, we have made a remarkable shift from our on-campus to off-campus education with your cooperation. And while school is important, so is your physical and mental well-being. During this time, it is important to take care of ourselves and each other. While your school timings have reduced, maintaining a good daily routine is extremely important. It will help you keep a healthy balance of your activities and maintain self-discipline. Do immerse yourselves in things you enjoy but keep it balanced with your studies and other chores. Help your mothers in their house-hold activities so that she is not over-burdened with the work she does to take care of your family- set the table and do the dishes. Be kind to your siblings, spend time with them and help them out in whatever ways you can. Although you are no longer spending most of your time in school, we hope you figure out what you love and find out more about it. Your teachers may not be there with you to teach things, but we hope you are learning new things on your own as well by getting creative, such as painting, drawing, reading books, learning origami etc. One of the best ways to relieve stress is to do yoga or any other safe exercises. Developing a habit of exercising daily can help you on a long term to keep you mentally and physically fit. Be in touch with nature by avoiding junk foods, ice-cold water / eatables stored in refrigerators for a long time as these promote the lifespan of viruses. Always use fresh cooked food in a balanced manner to increase immunity which is the only alternative to fight against covid -19. Be happy, help each other /needy person.

Since summer is finally here, remember to keep yourself hydrated at all times. Avoid staying outside in the sunlight for long periods of time and drink a lot of fluids. And lastly, remember that we are all living through this extraordinarily frightening and difficult time together. But it is important that we do our duty as human beings by maintaining social distancing, sanitising ourselves etc. If we stay safe, other people will also remain safe. We hope to see you soon once this pandemic is over.

Note : We hope you do your home assignments with due diligence. Kindly maintain a single notebook to do all the holiday assignments. Your holiday assignments will be evaluated as a part of the terminal examination. **Stay safe!**

Assignment -1

CLASS-12

ENGLISH

1. Draft Advertisements for the following (1 each):

A. Household item for sale

You propose to sell your flat as you are going abroad. Draft an advertisement for it to be published in the classified columns of 'The Times of India', New Delhi. (50 words)

B. To-let Question

2-You are Anurag/Aparna of 110,Swasthya Vihar , New Delhi .You wish to let out a portion of your newly built house. Draft an advertisement in not more than 50 words for publication in the "To-Let" column of The Hindustan Times, giving all necessary details .

C. Required/Vacancy/situation vacant

D. Matrimony

E. Services (Showroom/Gym/Coaching etc.)

3. Write speech on the following topics:

a) "To use the latest technology the right way, is in the hands of the youth today." Write a speech 150-200 words discouraging the misuse of technological products like cell phones, computers etc and highlighting the need to use them to promote harmony and goodwill in the society.

b) "Our Good Earth", an environmental awareness magazine has launched a marathon 'Clean Your City' campaign. As an active participant write a speech to be read out in the morning assembly urging students to participate in the campaign in 150-200 words.

4. Poster Writing:

a. Water is precious and each one of us must stop wastage. Prepare a poster in not more than 50 words urging people to employ various methods of rainwater harvesting in their colonies.

b. M/s Pen India has brought out a new gel pen in many colors. Prepare an eye catching advertisement for the pen, giving all relevant details.

c. Draft an advertisement announcing the launch of special health drink by Health Care Private Ltd., highlighting its nutritive value.

5. The recent rain caused great havoc in the city. Many buildings collapsed and several trees got uprooted blocking traffic at several places. Write a report to be published in a national daily.

6. Recently you went to your native village to visit your grandparents. You saw that some of the children in the age group 5-14 (the age at which they should have been at school) remained at home, were working in the fields or were simply loitering in the streets. Write a letter in 120-150 words to the editor of a national daily analysing the problem and offering solutions to it.

7.

QUESTIONS FOR PRACTICE

a) Who was Charley? What was his problem?

b) What had Sam written in his letter to Charley?

c) Why couldn't Sam go back to his old business in Galesburg?

d) What could have been the poet's childhood fears?

e) Why has the mother been compared to the late winter's moon?

f) Why did M. Hamel say about knowing one's language is a key to prison?

g) Whom did Mr. Hamel blame for not learning the French?

k) How did the Tiger King meet his end? What is ironical about his death?

l) How did the Maharaja manage to save his throne?

Biology

1. To study the effect of pH on seed germination. Note down in your assessment notebook.

2. To make an inventory of local tree, shrubs and herbs.

3. Study of Living with auto immune disease. Mention in your assessment notebook.
4. How to sugar effect on bean plant growth. Mention in your activity file.
5. Growing yeast- sugar fermentation, do this activity and make a short video for it.
6. Syllabus 12 class 2023-24

COMPUTER SCIENCE

1. Gurukulam Academy is transforming its result processing unit into computerized “ student Management System”. Help the institution to develop an integrated solution using concepts of Python list for adding new students to the existing list to students on the basis of marks obtained by them.
2. The entire processing system should support adding of updated marks, deleting the marks of students who have left the institution, followed by generating a report by arranging the marks of all the students in both ascending and descending order.
3. It should also include insertion and deletion of students’ marks at desirable position. Develop a Python program for the above scenario-based implementation.
4. Hindustan Chemical Ltd. Is a company that deals in manufacturing and exporting of chemicals across the world and have hundreds of employees on its roll. It wishes to computerize the process of salary generation. Write a Python program to enter the names of employees and their salaries as input and store them in a dictionary and also as a salary Generation Report.
5. Write a Python program to check whether a string starts with specified characters.
6. Write a python program that accepts a comma separated sequence of word as input and prints the unique words in sorted form (alphanumerically)

PHYSICS

1. To investigate how a series of capacitors charges and discharges
2. To Research and Build a Capacitor Storage Circuit LED
3. Obtain the formula for the electric field due to a long thin wire of uniform linear charge density without using Gauss’s law. [Hint: Use Coulomb’s law directly and evaluate the necessary integral.
4. It is now believed that protons and neutrons (which constitute nuclei of ordinary matter) are themselves built out of more elementary units called quarks. A proton and a neutron consist of three quarks each. Two types of quarks, the so called 'up' quark (denoted by u) of charge $\left(\frac{1}{2}\right)e$, and the 'down' quark (denoted by d) of charge $(-1/3)e$, together with electrons build up ordinary matter. (Quarks of other types have also been found which give rise to different unusual varieties of matter.) Suggest a possible quark composition of a proton and neutron.
5. With the help of a labelled working diagram. explain the principle, construction and working of a vandegraff generator. Mention its applications?

CHEMISTRY

1. Name the following halides according to IUPAC system:
 - (a) $\text{CH}_3\text{CH}(\text{Br})\text{CH}=\text{C}(\text{CH}_3)\text{CH}_2\text{Cl}$
 - (b) $\text{C}(\text{CH}_3)_2\text{Br}$
 - (c) $\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}(\text{Br})\text{CH}_3$
 - (d) $\text{ClCH}_2\text{C}=\text{CCH}_2\text{Br}$
 - (e) $\text{Cl}-\text{C}\equiv\text{C}-\text{Cl}$
 - (f) $\text{CH}_3\text{CH}\equiv\text{C}-\text{Cl}$
2. What happens when bromine attacks $\text{CH}_2=\text{CH}-\text{CH}_2-\text{C}\equiv\text{CH}$?
3. Write the structures of the following organic compounds:
 - (i) 2-Chloro-3-methylpentane
 - (ii) 1-Chloro-4-ethylcyclohexane
 - (iii) 2-(2-Chlorophenyl)-1-iodo octane
 - (iv) 4-tert-Butyl-3-iodoheptane
4. Prepare an investigatory project report on any one topic of chap 1 & 2 including the following points:
 1. Introduction to the topic.
 2. Research and Analysis

3. Theory
4. Chemical reaction
5. Data collection

5.Directions: These questions consist of two statements, each printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses.

- (a) If both Assertion and Reason are correct and the Reason is a correct explanation of the Assertion.
- (b) If both Assertion and Reason are correct but Reason is not a correct explanation of the Assertion.
- (c) If the Assertion is correct but Reason is incorrect.
- (d) If both the Assertion and Reason are incorrect.

1. **Assertion :** SN2 reaction of an optically active aryl halide with an aqueous solution of KOH always gives an alcohol with opposite sign of rotation.

Reason : SN2 reactions always proceed with inversion of configuration.

2. **Assertion :** Alkylbenzene is not prepared by Friedel-Crafts alkylation of benzene.

Reason : Alkyl halides are less reactive than acyl halides.

3. **Assertion :** Molarity of a solution in liquid state changes with temperature.

Reason : The volume of a solution changes with change in temperature.

4. **Assertion :** If a liquid solute more volatile than the solvent is added to the solvent, the vapour pressure of the solution may increase i.e., $p_s > p_o$.

Reason : In the presence of a more volatile liquid solute, only the solute will form the vapours and solvent will not.

MATHEMATICS

Q1. Find $\text{gof } f(x) = |x|$, $g(x) = |5x + 1|$.

Q2. Show that function $f: \mathbb{N} \rightarrow \mathbb{N}$, given by $f(x) = 2x$, is one - one.

Q3. Let $f: \{1, 3, 4\} \rightarrow \{1, 2, 5\}$ and $g: \{1, 2, 5\} \rightarrow \{1, 3\}$ be given by $f = \{(1, 2),$

Q4. Let L be the set of all lines in plane and R be the relation in L define if $R = \{(L_1, L) : L_1 \text{ is parallel to } L\}$. Show that R is symmetric but neither reflexive nor transitive.

Q5. Find the principal value of $\cot x$

Q6. Construct a 3×2 matrix whose elements are given by $a_{ij} = |i - 3j|$

Q7. The bookshop of a particular school has 10 dozen chemistry books, 8 dozen physics books, 10 dozen economics books. Their selling prices are Rs. 80, Rs. 60 and Rs. 40 each respectively. Find the total amount the bookshop will receive from selling all the books using matrix multiplication.

Q8 (a). Find the equation of the line joining (1,2) and (3,6) using determinants.

Q9. solve $x - y + z = 4$, $x - 2y - 2z = 9$, $2x + y + 3z = 1$

Q10. Let A be the set of all students of a Boys' school. Show that the relation R in A given by:

$R = \{(a, b) : a \text{ is sister of } b\}$ is an empty relation and the relation R' given by:

$R' = \{(a, b) : \text{the difference between heights of } a \text{ and } b \text{ is less than } 3 \text{ metres}\}$ is an universal relation

Q11. Let R be the relation in the set Z of integers given by: $R = \{(a, b) : 2 \text{ divides } a - b\}$

Show that the relation R is transitive. Write the equivalence class $[0]$

Q12. Show that $R = \{(a, b) : a, b \in \mathbb{A}; |a - b| \text{ is divisible by } 4\}$ is an equivalence relation. Find the set of all elements related to 1. Also write the equivalence class $[2]$

Q13. solve the system of equations

$$x + 3z = 90, -x + 2y - 2z = 4, 2x - 3y + 4z = -3.$$

Q14. Show that function $f: \mathbb{N} \rightarrow \mathbb{N}$ given by $f(x) = 3x$ is not surjective.

Q15. Show that function $f: \mathbb{N} \rightarrow \mathbb{N}$ given by $f(x) = x$ is not injective

Q16. Find the principal value of all inverse trigonometric function and draw graph of all inverse trigonometric functions.

Q17- write about two those mathematician who explain the algebraic equations and their solution by matrix method