



DAV PUBLIC SCHOOL, BAZPUR
SUMMER HOLIDAY ASSIGNMENT 2020-21
CLASS- XII SCIENCE

ENGLISH :

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| 1. Read the chapters and the poems of Flamingo and Vistas and find out the underlying values in each chapter and poem. (Holiday Homework notebook) | 20 |
| 2. Watch any movie of your choice and give your comment as a critic. (Holiday Homework notebook) | 20 |
| 3. Write a biography of a migrant who came back to your region during lockdown and mention the hardships faced by that person/family. (chart/file/note-book/Power point presentation) | 30 |
| 4. Prepare a school Newsletter and cover the activities/steps/consequences which were held/ which will be held in your country regarding CORONA PANDEMIC and also add your SUGGESTION as literary creation. (chart/file/note-book/ Power point presentation) | 30 |

CHEMISTRY :

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| 1. Make investigatory PPT or project report on one of the given topics for your final practical. | [30 marks] |
| i. Fermentation | |
| <ul style="list-style-type: none">• Fuel Go Boom• Get More Hydrogen from Your Water• Hydrofoam: Changing the Way the World is Powered• Investigation Of Foaming Capacity Of Different Washing Soap• Measuring Solubility• Measuring the Amount of Acetic Acid In Vinegar• Mohr's salt• Percentage Purity Of Iron Wire• Pesticides in Fruits and Vegetables• Preparation Of Cuprammonium Rayon Threads | |

- **Preparation of Ink**
- **Acidity In Tea**
- **Analysis Of Honey**
- **Analysis Of Vegetables And Fruit Juices**
- **Comparing Lactose Percentage between Whole Milk and Powdered Milk**
- **Comparison of the Citric Acid Concentration**
- **Content of Cold Drinks Available in the Market**
- **Determination Of Caffeine In Tea Samples**
- **Determination of Contents of Tooth Powder**
- **Determine the Quantity of Casein in Milk**
- **Discoveries In The Field Of Chemistry**
- **Dyeing of Wool, Silk and Cotton in Malachite Green**
- **Effect Of Sodium Carbonate On Foaming Capacity Of A Soap**
- **Effects of Dye on Different Types of Fabric**
- **Effects of Heat on Vitamin C in Tomatoes**
- **Electrical Cleavage of Mineral Ore**
- **Electrolyte Turns On the Solar Cell**
- **Evaluation of Drinking Water from Various Sources**
- **Extraction of Nicotine Sulphate from Samples of Cigarettes**
- **Preparation Of Soyabean Milk**
- **Study of Content of Ascorbic Acid in Citrus fruits**
- **To Check The Ions Present In The Toothpaste And Determine The Quality**
- **To Compare The Rate Of Fermentation Of Given Samples Of Wheat Flour**
- **To Prepare a Smoke Bomb**
- **To Study the Digestion of Starch by Salivary Amylase**
- **To Study the Effect of Metal Coupling on the Rate of Corrosions**
- **To Study the Presence of Insecticides and Pesticides in Various Fruits and Vegetables**
- **To Study the Presence of Oxalate Ion In Guava Fruit**
- **Variation of Conductance with Temperature in Electrolytes**

- Which Grease Is Good for You?
- Which of the Plant Material Used Would Make the Best Red Color on Fabric.

2. Write Practical experiments that I'll send you in the whatsapp group in your experiment file. [30 marks]

3. Solve NCERT Intext and exercise questions of chapters 1-6 in holiday homework notebook and earn. [20 marks]

4. Complete and understand the following topics from different chapters in holiday homework notebook. [20 marks]

- I. Biomolecules - Structural determination of Glucose, Glycosidic linkage, Peptide linkage, Disaccharides and polysaccharides, Chemical structure of Nucleic acids DNA and RNA
- II. Polymers - Classification of polymers, Mechanism of addition Polymerisation, Monomeric units of following polymers (Nylon-6,6, Nylon 6, Nylon 2,6, Decron, Bakelite, etc)
- III. Chemistry in every day life - broad classification of Drugs, Soap and detergents, Type of soap and detergent, Artificial sweeteners, Preservatives, Antiseptics and disinfectants, Bacteriocidal and static medicine, Antihistamine and antidepressants.
- IV. Learn and write all name reactions from organic chemistry.
- V. Learn p-block, d-block and f-block elements in periodic table.

PHYSICS :

1-COMplete your practical work in section A write first 6 experiments and in section B write first 6 experiments.

2:- Write any five activities from physics lab manual.

3:- Make any investigatory project from any topic from your Physics Ncert book and also write project report in Project file in good manners.

4- Prepare these topics and write in homework notebook separately day by day

A: GAUSS Law applications, Equipotential surfaces, concept of Capacitors

B: Solve all ncert examples from chapter 1 and 2

C: dipole and electric field due to dipole in both conditions

D: Potential energy concept due to two charges

MATHEMATICS :

1. Solve what is the principal value of $\left(\tan \tan \frac{2\pi}{3}\right)$

2. Write the principal value of $\left(\tan \tan \frac{7\pi}{6}\right)$

3. Evaluate: $\left[2 \cos \cos \left(2\frac{1}{2}\right)\right]$

4. Solve: $2(\cos x) = (2 \operatorname{cosec} x)$, $x \neq 0$.
5. Write the number of all possible matrices of order 2×3 with each entry 1 or 2.
6. If A and B are symmetric matrices, such that AB and BA are both defined, then prove that $AB - BA$ are both defined, then prove that $AB - BA$ is skew-symmetric matrix.
7. Show that all the diagonal elements of a skew symmetric matrix are zero.
8. A trust caring for handicapped children gets Rs 30,000 every month from its donors. The trust spends half of the funds received for medical and educational care of the children and for that it charges 2% of the spent amount from them, and deposits the balance amount in a private bank to get the money multiplied so that in future the trust goes on functioning regularly. What percent of interest should the trust get from the bank to get a total of Rs 1,800 every month? Use matrix method, to find the rate of interest. Do you think people should donate to such trusts?
9. If A and B are square matrices of order 3 such that $|A| = -1$, $|B| = 3$, then find the value of $|2AB|$.
10. For what values of k, the system of linear equations $x + y + z = 2$, $2x + y - z = 3$, $3x + 2y + kz = 4$ has a unique solution?
11. Using matrix method, solve the following system of equations:
 $3x - 2y + 3z = 8$, $2x + y - z = 1$, $4x - 3y + 2z = 4$
12. Using matrices, solve the following system of linear equations
 $x + 2y + z = 7$; $x + 3z = 11$; $2x - 3y = 1$
13. Make any working of Maths from class XII.

BIOLOGY :

1:-Write two questions and answer daily chapter wise (2to5) and learn by heart.

(2x30=60)

2:-Learn by heart and write-

Topics-

A:-Development of mega sporophyte and microsporocyte

B:-Male and female reproductive system human and STDs

C:-Gametogenesis

D:-Pollination

E:-Contraception

3:- Make an investigatory project from any topic in your NCERT Biology book.

INSTRUCTIONS :-(a)-Write the project report on A4 size plain paper in your own handwriting.

(b)-Draw concerned colorful pictures.

(c)- The project should contain certificate, acknowledgement, index concerned information and bibliography.

PHE :

- 1. What do you mean by the Tournament? Explain the types of tournaments? (10marks)**
- 2. Briefly explain the Importance of tournament. (10marks)**
- 3. What are Intramural and extramural Activities? And its importance. (10marks)**
- 4. Briefly explain the yoga and yoga preventing hypertension and blood pressure. (10marks)**
- 5. Explain the balanced Diet. Explain Macro and micro nutrition. (10marks)**
- 6. Make a Project Report on your favorite game as per syllabus? (50 marks)**

Mention the points given below also:

- Ø History**
- Ø Measurement**
- Ø Diagram**
- Ø Arjuna Awardees Players Name with year**
- Ø National & International Tournaments**

IP :

Q1. Write the python code using Pandas library for followings:

- a. Find the min, max, sum and average of marks in the students marks table. 10**
- b. Consider a Dataframe, where each row contains the item category, item name and expenditure. Group the rows by category and print the total expenditure per category. 10**
- c. Given a series, print all the elements that are above the 75th percentile. 10**
- d. Write SQL queries for all aggregate methods, groupby and having clauses on a table STUDENT. 20**
Make the table STUDENT with following fields; Rollno, Name, Address,

Q2. Make a Pandas Project with following features (This project will be used as your board examination project work, So Make your project carefully): 50

- a. Make a spreadsheet in Microsoft Excel and save it as a csv file.**
- b. CSV file should be relevant to employee data.**
- c. Import csv file to Python platform by using Pandas and make it as a dataframe.**
- d. Apply all the aggregate functions, group by function, transform function, sorting, binary function, apply, applymap, pipe function on dataframe**
- e. Copy and paste all the code to the word file. Take a screenshot of the CSV file.**

f. **If you are not having a laptop/desktop at home. Do write all code and functions in the assignment notebook.**

**** Note: Nobody will take the printout of coding without teacher verification.**