

Home Assignment 2020-21

Class – XI Sci

English

Note: Do the given work in any of your English notebook

Spend atleast 3 hours a day in your studies

Engage yourself in constructive recreational activities. The given work will be checked by the teacher whenever the classes resume and will be assessed as a part of enrichment activities.

Q1. Draft a creative poster on 'Protection against Corona Covid 19' mentioning all the necessary details

Q2. National parks and other nature reserves help protect our rich flora and fauna and provide a place for wildlife to flourish. Write an article in about 120-150 words about the need to better protect them from threats. Your article may talk about

- The advantages of nature preserves over zoos
- Challenges faced by wildlife in such places- poachers, unfamiliar diseases, etc.
- Long term advantages of national parks, such as promoting tourism

Q3. You have been given the opening of a story. Complete it in an interesting way in 150- 200 words. Add a setting, characters, dialogue or action as you see fit. Give it a suitable title.

Nidhi woke up early, excited for the day ahead. She had talked to all of her friends the previous day and they had decided to meet and go to.....

Q4. Many people are quitting their high paying 9 to 5 jobs to follow their heart by starting 'unconventional' careers. Write a letter to the editor expressing your opinion on this bold move.

In your letter you should:

- Highlight the trend of taking up unconventional jobs, mentioning some examples
- State how job satisfaction is important for maximum productivity
- Appreciate the courage of those who take the bold step

Q5. You have been greatly influenced by Mahatma Gandhi's quote: "There is a sufficiency in the world" for man's need but not for man's greed". Write a letter to the editor of a journal of philosophy expressing your views on this.

In your letter you should:

- State how excessive Urbanization is upsetting the balance of nature
- Mention how being in the rat race has made us selfish, discontented and irritable
- Stress that being content with what we have leads to real happiness

Q6. After fighting against cervical cancer for the last two years your neighbour's grandmother passed away yesterday. Draft a classified advertisement to be published under "Obituary" column of the newspaper.

Q7. As Swaminathan, you had employed the services of Sonica Packers, 1848, C Block Connaught place, New Delhi to pack and transport your household goods and car to Chennai. Complain the manager for late delivery of goods and damage caused to the goods.

Q8. You are fond of Animals. Share your experience of acquiring a pet dog whom you named Gipsy in about 150- 200 words. You love the dog a lot.

Maths

ACTIVITY 1:-

OBJECTIVE : To interpret geometrically the meaning of $i = -1$ and its integral powers.

MATERIAL REQUIRED : Cardboard, chart paper, sketch pen, ruler, compasses, adhesive, nails, thread.

ACTIVITY 2:-

OBJECTIVE : To obtain a quadratic function with the help of linear functions graphically.

MATERIAL REQUIRED: Plywood sheet, pieces of wires.

ACTIVITY 3:-

OBJECTIVE :To construct a Pascal's Triangle and to write binomial expansion for a given positive integral exponent.

MATERIAL REQUIRED : Drawing board, white paper, matchsticks, adhesive.

ACTIVITY 4:-

OBJECTIVE : To demonstrate that the Arithmetic mean of two different positive numbers is always greater than the Geometric mean.

MATERIAL REQUIRED : Coloured chart paper, ruler, scale, sketch pens, cutter.

Physics

Make a hand written spiral project which include Cover page, Preface , Acknowledgement , Index ,Introduction , Conclusion, Glossary(words), Appendix(important definitions and facts), Bibliography(Reference sources), Teachers Report.

ACTIVITY-1

To prepare a project report on “ Refrigerator “ {At least 15 pages}

ACTIVITY-2

To make a project report on “ Bernoulli’s principle and its application” .{ At least 20 pages}

ACTIVITY-3

To prepare a project report on “ The solar heating and Night cooling of surfaces”. {At least 15 pages}

ACTIVITY-4

To prepare a project report on “ Structure of human eye and function of different parts of human eye.” Includes defect in eye also. { At least 15 pages}

ACTIVITY -5

To make a project report on the “ Nuclear reactor and its application”. { At least 20 pages}

ACTIVITY-6

To prepare a project report on “ Heat engine”. { At least 15 pages}

ACTIVITY-7

To prepare a project report on “ Doppler’s effect in sound”. {At least 15 pages}

ACTIVITY-8

To prepare a project on “Conversion of solar energy into electrical energy.” { At least 15 pages}

ACTIVITY- 9

To prepare a project report on “ Sources of energy”. { At least 20 ;pages}

ACTIVITY-10

To prepare a project report on “ Pulley mechanics and understanding Gear structure. ” {At least 20 pages}

ACTIVITY-11

To prepare a project report on “ Law of equipartition of energy. “ Explain , why the mountains are so cold rather it is closer to the sun than earth.

ACTIVITY-12

To prepare a project report on “ Black Body Radiation” {At least 10 pages}

ACTIVITY-13

To prepare a project report on “ The Realms of Gravity”. {At least 15 pages}

ACTIVITY-14

To prepare a project report on “ Rocket propulsion theory “. {At least 10 pages}

Chemistry

- To make a Poster on 'Ban plastic'.
- To make a Kaleidoscope.
- Comment upon the state "Green chemistry is an alternative tools for reducing pollution".
- You are given a hammer, a battery, a bulb, wires and a switch.
 - How could you use them to distinguish between samples of metals and non metals ?
 - Assess the usefulness of these tests in distinguish between metals and non metals.
- Complete the following cross word puzzle (Figure)

Across:

- (1) An element with atomic number 12.
 (3) Metal used in making cans and member of Group 14.
 (4) A lustrous non metal which has 7 electrons in it's outermost shell.

Down:

- (2) Highly reactive and soft metal which is imparts yellow colour when subjected to flame and is kept in Kerosene.
 (5) The first element which of second period.
 (6) An element which is used in making fluorescent bulb and is second member of Group 18 in the modern periodic table.
 (7) A radioactive element which is the last member of halogen family.
 (8) Metal which is an important constituent of steel and forms rust when exposed to moist Air.
 (9) The first metalloid in modern periodic table whose fibres are used in making bullet-proof vest.

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- "Hydrogen occupies a unique position in Modern Periodic Table". Justify the statement.
- To make a Investigatory project on 'Rate of evaporation of different liquids'. (Abstract , Introduction, factor influencing rate of evaporation) about 10 pages.
- Create your own molecules design with home- made clay recipe and toothpick.

Biology

- Draw well labelled diagram of –
 - nephron
 - Bones of ribcage
 - Heart
- Make a project report on genetically modified organisms including their use and abuse.
- Discuss the importance of ph. in
 - Tooth decay
 - Human digestive system
 - Self-defence by plants and animals.
- Answer the following questions in biology notebook.
 - Food does not pass through digestive system through gravity .this is clear from the fact we can digest food even we are lying down. Explain the logic behind the passage of food through our digestive system.
 - Rocky saw a snake in his garden while playing. List the changes taking place in his body in such situation.

3. Give reasons for the following.
 - i) Rings of cartilage present in trachea.
 - ii) Lungs always contain a residual volume of air.
 - iii) A person consumes alcohol walks clamisty.
 - iv) Sleeping under tree at night is not advisable.
 - v) Urine is slightly thicker in summer than in winter.
4. In humans RBC do not have nucleus is there any significance of that adaptation.
5. Why does swelling appears in legs if one sits or stands still for a long time?
6. A person vomits out milk every time after drinking. What can be the probable reason?
7. How does construction of dams across rivers get linked with the production of greenhouse gases?
8. Photosynthesis occurs in sites other than leaves, yet leaves are considered the most suitable site for photosynthesis. Why?
9. Indiscriminate use of pain killers and sometimes self-medication damage kidney. Explain
10. Why do we faint?

Physical Education

- 1- Computation of BMI from family or neighborhood and graphical representation of data
- 2 _ Pictorial presentation of any five Asanas for improving concentration
- 3_ Listing career options in Physical Education
- 4 -Competitions in various sports at National and International level.
 1. Athletics, 2. Cricket, 3. Football, 4. Hockey, 5.Volleyball, 6. Tennis, 7. Basketball
- 5- What is physical fitness Elaborate the importance of physical fitness in daily life.