



CBS SR. SEC SCHOOL



Mauri( Ch. Dadri)

## Summer Holiday homework class 12<sup>th</sup> Sc

### Hindi

- पाठ 1 भक्तिन, पाठ 2 बाजार दर्शन, पाठ 3 काले मेघा पानी दे, पाठ 4 पहलवान की ढोलक
- पाठ 5.श्रीराम के फूल (सभी पाठों को लिखें और याद करें)

### •परियोजना कार्य .....

वर्तमान समय में विभिन्न क्षेत्रों में महिलाओं की उपलब्धियों पर एक परियोजना कार्य तैयार करें कार्य को पूरा करने के लिए रंगीन चित्रों का प्रयोग करें। \*कोई भी पांच कहानी पढ़ें और उनसे क्या शिक्षा मिलती है लिखिए।

**Mathematics** Written work : Solve Ex of given chapters-\* Inverse trigonometric function

- Algebra of matrices, Determinants, ● Continuity ● Assignment-ch -2,3 (Test)

**Revision work :-** Revise Ch- 2 ,3 ,4 with Formulas

**Activity Card :** \* Prepare a notebook of all formulae related to all chapters and make a chart of formulae of Ch- Vectors

**Physical education :-** Write and Learn first five chapters. There will be test after holidays.

**Computer :-** Written work done in your FNB according to your syllabus .

Write lesson 3 to 7 with solved and unsolved exercises.

Make approx 20 programs of python language, Save in your pen drive and carry with your holiday homework.

Revise lesson 1 to 7 of the python language.

**Home science :-** Write and learn Ch 1 and 2.

Make a chart on Nutrition and Diet for a child of 0 to 6 months

**Chemistry :-** Learn 3 units ,Unit-1 Solution , Unit-2 chemical kinetics , Unit -3 Electrochemistry

Write and. Learn NCERT Exercise of these unit in notebook. Solve given assignment

Make a model on Electrochemical cell

### Biology

- Complete unit 1 complete and Learn.
  - Take a hibiscus flower or any other flower ,disect it, and separate the parts like sepals, petals, stamens and pistil- paste these either in your notebook or chart with well labelling and describing the functions of each part.
  - Take 10 different type of seeds and identify them as monocot or dicot and mention in your notebook in a table form.
  - Soak some gram seeds and disect them and paste it in your notebook with labelling all the parts of seed with their functions.
  - Make a 3D model of either of them:  
1. DNA, 2. Meiosis  
( you can use thermocoal, clay, colourful threads, straw.....etc materials for making a model).
- Solve the given assignment.

### English

1. Write any five letters to the editor .
  - 2 Solve 10 given unseen passages.
  - 3 write and learn all the word meanings from the lessons 1,2,3 and learn all the questions and answers from these lessons. (Flamingo)
- Make a project on the poem 'A Thing of Beauty'.

### **Physics**

- Learn chapter 1 and 2 (Unit 1 complete)
- Write and learn exercises questions of both chapters
- Make a working model on
1. Resources management.
  2. Sustainable development.
- Read and make a project on Van-de-Graff-generator.
- Solve given assignment.-

### Assignment – Sub:- Biology

1. Why is double fertilization considered an evolutionary advancement in angiosperms?
2. In many plants, self-pollination is prevented even when stamens and carpels mature simultaneously. Why do you think plants have evolved such mechanisms?
3. If a plant species loses its ability to produce functional pollen, how might it adapt to continue its reproductive cycle? Suggest a strategy.
4. Why is the menstrual cycle considered a sign of reproductive health in females?
5. What would happen if the corpus luteum fails to form after ovulation?
6. Why is it biologically impossible for more than one sperm to fertilize an ovum in humans? What mechanisms ensure this?
7. Why is sex education considered important in schools? What could be the consequences of its absence?
8. What are the possible consequences if the use of contraceptives is discouraged in a country with a high population growth rate?
9. How would the misuse or overuse of abortion pills impact a woman's reproductive health in the long term? 10. Why do you think introducing HPV vaccination is important for adolescent girls?
11. Suggest two non-clinical and two clinical approaches for controlling population growth. How do they differ in Implementation.
12. Why did Mendel choose pea plants for his experiments? How would his results differ if he had chosen humans?
13. Can a child have blood group 'O' if one parent has blood group 'AB'? Justify your answer.
14. If a gene is sex-linked, how will its pattern of inheritance differ in males and females? Give an example
15. Two individuals with normal phenotypes have a child with a genetic disorder. What does this suggest about the nature of the disorder?
16. Why are sex-linked recessive traits more common in males than in females?
17. A woman with normal vision has a colorblind son. What does this indicate about the genotype of the mother and father?
18. How can you explain incomplete dominance in snapdragons using Mendel's principles?
19. Can a male be a carrier of hemophilia? Why or why not?
20. Why does mitochondrial DNA show maternal inheritance only?
21. How is co-dominance different from incomplete dominance? Support your answer with suitable examples
22. How can you explain incomplete dominance in snapdragons using Mendel's inheritance.
23. If both parents are carriers of thalassemia, what is the chance their child will be affected? Construct a Punnett square to explain.
24. What would be the consequence if crossing over did not occur during meiosis? How would it affect genetic variation?
25. How does linkage affect the inheritance pattern of genes? Explain using an example
26. Can a child inherit a trait that neither parent visibly expresses? Under what genetic conditions can this happen?
27. Why is the probability of a girl being affected by a sex-linked recessive disorder lower than that of a boy?
28. How can karyotyping help in identifying genetic disorders before birth?
29. If a dominant trait is rare in a population, will the number of heterozygotes be high or low? Explain with reason
30. Why do sex-linked traits skip generations in some families? Explain using pedigree analysis.

### Assignment Sub:- Physics

1. What is the SI unit of electric charge?
  2. What is the direction of electric field lines around a positive charge?
  3. State Coulomb's law and its mathematical expression.
  4. What is the electric field at a point due to a point charge  $q$  at a distance  $r$  ?
  5. Define electric potential and write its formula for a point charge.
  6. What is the work done in moving a charge  $q$  through a potential difference  $V$  ?
  7. What is the capacitance of a capacitor, and how is it defined mathematically?
  8. How does the insertion of a dielectric between the plates of a capacitor affect its capacitance?
  9. What is the unit of capacitance?
  10. Explain the principle of a Van de Graff generator.
  11. What is the electric potential energy of a system of two charges  $q_1$  and  $q_2$  separated by a distance  $r$  ?
  12. What is the electric field inside a conductor in electrostatic equilibrium?
  13. What is the relationship between electric field  $E$  and electric potential  $V$  ?
  14. How does an electroscope demonstrate the presence of electric charge?
  15. What are the practical applications of capacitors in electronic circuits?
- Why is a Van de Graff generator used for electrostatic experiments? Describe its working principle.
16. Explain the role of capacitors in electronic circuits. Provide an example of a practical application.
  17. How does an electroscope work? What property of charge does it demonstrate?  
A charged sphere has a charge of  $3 \times 10^{-6}$  C. Calculate the electric field at a distance of 10 cm from its centre.
  18. Two charges of  $+5$  C and  $-5$  C are placed 2 meters apart in a vacuum. Calculate the force between them.
  19. A parallel plate capacitor has a capacitance of  $4 \mu\text{F}$  and is connected to a 12V battery. Find the charge stored on the plates.
  20. An oil drop carrying a charge of  $2.5 \times 10^{-16}$  C is suspended between the plates of a capacitor with a potential difference of 200V. Calculate the strength of the electric field required for equilibrium.

Sub:- chemistry assignment

Que.1 5gram unknown solute is dissolved in 295 gram if molarity and density of solution are 0.05 molar and 1.5 gram per CC the molecular weight of unknown solute is

Que.2. The depression in freezing point of water containing ethylene glycol is 7.4 degree Celsius find the mass of ethylene glycol added in 500 gram water.  $K_f$  is equal to 1.86 kelvin kilogram per Mol

Que.3 The molality of a solution containing 3 gram acetic acid in 50 gram benzene

Que.4 At 100 degree Celsius the vapour pressure of a solution of 6.5 gram of solute in 100 g water is 732 millimetre. if  $k_b$  is equal to 0.52 the boiling point of the solution will be

Que.5 How many grams of 70% weight by weight concentrated nitric acid solution should be used to prepare 250 ml of 2 molar  $\text{HNO}_3$ .

Que.6 mole fraction of solute in one molal aqueous solution is

Que.7 A solution of sucrose has been prepared by dissolving 68.5 gram of sucrose 1000 gram of water the freezing point of solution will be.

Que.8 If molality of dilute solution is double the value of  $K_f$  will be

Que.9 0.5 molal aqua solution of weak acid is 20% ionized  $k_f$  for water is 1.86 Kelvin kilogram per mole lowering in freezing point of solution is

Que. 10 Boiling point of benzene is 353. 23 Kelvin when 1.8 gram of non volatile solute is dissolved in 90 gram of benzene the boiling point is to 354.11 Kelvin.  $K_b$  for benzene is 2.53 Kelvin kilogram per mole then molecular mass of non volatile substance