SPRINGFIELD PUBLIC SCHOOL

● LEARN ● ACHIEVE ● SUCCEED

Winter Break HOME WORK

Dear Students

Have a great winter vacation!! Despite the cold winter time is fun and comes with its share of excitement. We would like to remind you that this time is also an opportunity to explore your interests and build your skills and talents.
Your aim should be to "Make Yourself" a sensible, creative and sincere person who is always ready to make efforts for the betterment of society.

A word to parents
Parenthood is a beautiful blessing. With this blessing, also comes responsibility. With your support, we teach your child the importance of education and learning. However, your role in your child's future is the most important one. Accept their imperfections and allow them to learn, develop and transform. As parents, it is important to invest your time with them now and never forget that you are doing an excellent job as a parent.

• Encourage your child's creative skills and interests in addition to his/her education at school.

• Children may not listen to what you say but will eventually always try to imitate your behaviour.

• Help your child cultivate a healthy self-image by implanting a positive mind set in him/her that he/she is lovable, capable and unique.

• Tell your child about your childhood days and the way people used to live in those days. Also tell him/her about your grandparents and parents.

Regards
Principal

CLASS-XI

PHYSICS

- Solve 5 sample papers of any of the question bank in a separate notebook.
- Make a visual presentation on any of the following chapters:
  a) Kinematics- projectile $ Graphs.
  b) Laws of motion.
  c) Rotational motion of rigid bodies.
  d) Gravitation.
  e) Thermal properties of matter.
- Periodic Test: Properties of bulk matter

CHEMISTRY

- Solve 5 sample papers from any of the question bank.
- **Make a visual presentation on any of the following chapters:**
  a) S-block elements.
  b) P-block elements
  c) Organic chemistry: Principles and techniques.
  d) Hydrocarbons.
- **Periodic test:**
  S-block elements.
  P-block elements

Do the following questions:

One mark qustions
1. Neutrons can be found in all atomic nuclei except in one case. Which is this atomic nucleus and what does it consists of?
2. Write the electronic configuration of O2- .
3. What are the values of n and l for 2p orbital?
4. What is the total number of sigma and pi bonds in the following molecules? i) C2H2 ii) C2H4
5. How do you express the bond strength in terms of bond order ?

Two Mark questions
1. Calculate wave number of yellow radiations having wavelength of 5800 A0 .
2. Write the complete symbol for the atom with the given atomic number (Z) and mass number(A). (a) Z = 17, A = 35 (b) Z = 92 , A = 233
3. Using s,p,d and f notation, describe the orbital with the following quantum numbers- (a) n=1,l=0 (b) n=3, l=1 (c) n=4, l=2 (d) n=4, l=3
4. (a) First electron affinity are negative but the successive values are positive. Why? (b) Why does noble gases have the highest radii in their respective periods?
5. Explain why cations are smaller and anions are larger in radii than their parent atom?

Three Mark questions
1. State (a) Hund's Rule of maximum Multiplicity (b) Aufbau Principle (c) n+l rule
2. Write down the quantum numbers n and l for the following orbitals a. 2p b. 3d c. 5f

3. a) Why does electronegativity value increases across a period and decreases down period? b) How does electronegativity and non – metallic character related to each other?
4. Apart from tetrahedral geometry, another possible geometry for CH4 is square planar with the four hydrogen atoms at the corners of the square and at the carbon atom at its centre. Explain why this is not square planar
5. Which out of NH3 and NF3 has higher dipole moment and why?

BIOLOGY

- Prepare PowerPoint presentation on Biological classification or Human physiology.
- **Periodic test** : Cell cycle and division
  Plant kingdom.
- **Project work** 1. Prepare a herbarium of Five aromatic plants growing in Northern region 2. Prepare a herbarium for ten different types of monocot leaves based upon their external morphology.
- **Draw a well labeled Diagram of:**
  1. Bacteria and Eubacteria.
  2. TMV and T4 Bacteriophages.
  3. Euglena.
  4. Amoeba.
  5. DNA.
  6. Different nucleotides of DNA and RNA.

Do the following questions:
   Q1: Explain the structure of cynobacteria.
   Q2: What do you mean by herbarium? Explain main taxonomical aids used to study biodiversity?
   Q3: What is the function of endospores in bacteria?
   Q4: What are the different types of lichens? Explain them.
   Q5: Explain various types of life cycles found in bryophyte.
   Q6: Write down some of the characteristic features and some defining features of living organisms.
   Q7: Define natural system of classification. Why there is a need of classification?
   Q8: Why bryophytes are known as amphibians of plant kingdom?
   Q9: What do you mean by coelome. What are its types? Define each type.
   Q10: Define levels of organization. What are the various types of levels of organizations?
   Q11: Explain the process of double fertilization in mango plant.
   Q12: Give the characteristic features of the second largest phylum of animal kingdom.
   Q13: Which part of the embryo form root and what are the various zones of root?
   Q14: What are the modifications of the roots?
   Q15: Explain the structure of dicot and monocot seed.
   Q16: Explain with the help of flow chart different type of plant tissues.
   Q17: What do you mean by phylotaxy? What are the types of phylotaxy?
   Q18: How is inflorescence different from flower?
   Q19: Define true and false fruit. Why pear is known as false fruits?
   Q20: From which part of the plant seed is formed? Differentiate between monocot and dicot seed.

ENGLISH
- Revise chapters: Birth, The ghat of the only world, Albert Einstein at school, The Address.
- Revise the syllabus for Periodic examination to be conducted in the month of January.
- Writing Tasks:-
- Write Articles on the following topics:
  1) Role of Youth in fighting corruption.
  2) Living in a metro
- As a vice principal draft a notice in 50 words informing the prefects, monitors and other discipline in charge of the students of a leadership training camp being organized by school.
- Design a poster to be issued by the ministry of health in public interest warning people against the dangers of smoking.
- You lost your briefcase while travelling in Delhi, metro . Create an Ad in 50 words for Lost and Found coloumn of a newspaper.

MATHS

- Revise the syllabus for Periodic examination to be conducted in the month of January.
- **Syllabus for periodic test:** Ch-10 (Straight line), Ch-11 (conic section), Ch-15 (Statistics) , Ch-16 (Probability)
- Solve any 5 sample papers.
- Do NCERT exercises questions and examples.
- **Activity:** Draw Parabolla, Ellipse , Hyperbola of different dimentions and calculate their axis , vertex , direcrix, ecentricity and latus rectum.
- Find the probabilty of a working ceiling fan.

FINE ART

- Practical: complete Art file best 30 sheets.
- Revise the syllabus for Periodic examination to be conducted in the month of January.
- Syllabus for periodic test: ch- Ajanta art of painting , explaination of padma pani , Taj Mahal, Gol gumbuz, Quitab minar.

PHYSICAL EDUCATION

- Prepare practical files for final practical exam.
- Prepare chart on any one of following games: Volleyball, Basketball, Badminton , Cricket , Kabaddi.
- Revise the syllabus for Periodic examination to be conducted in the month of January.
- Syllabus for periodic test: ch-9 Psychology and Sports, ch- 10 Training and Dopping in Sports.

ACCOUNTANCY

- Solve practicals of
  1. Journal
  2. Goods and Service Tax,
  3. Bank Reconciliation Statement
  4. Cash-Book

BUSINESS STUDIES

- Revise following chapters with case studies
  1. Nature and Purpose of Business
  2. Forms of Business Organisation
  3. Public, Private and Global Enterprises(Prepare the list of different public sector, private sector and global enterprises near your area)
  4. Business Services

ECONOMICS
- Periodic test: Indifference curve, Theory of demand, Elasticity of demand, Production function.
- Prepare PPT On any of the following topics:
  a) Theory Of demand
  b) Production function
  c) Cardinal utility
  d) Ordinal utility

WINTER BREAK