SRI RAM KRISHAN DAV PUBLIC SCHOOL, SURIYA, GIRIDIH

WINTER VACATION HOME WORK (2025-26)

CLASS-XII(SCIENCE)

ENGLISH

1. Attempt all Questions

A. As the Sports Captain of your school, write a notice for student's notice-board informing budding cricketers to attend trials for selection in school teams. Invent all the necessary details.

B. The Residents' Welfare Association of Golden Apartments, Chennai is starting a Book Club. The opening of the club is on Saturday, 13th June. Write a notice inviting residents to the inauguration. Also, mention the activities that the Club will undertake.

C. M/s Shyam Lal & Sons are opening a new branch of their grocery store 'Galaxy Novelties' in Geetanjali Enclave, Dwarka, Delhi. The inauguration ceremony is fixed for Sunday, the 19th of October, 20XX at 11:00 a.m. Prepare a draft of formal invitation for the purpose.

D. You are Anurag Kashyap of sector 67, Noida, Uttar Pradesh. You are invited by your colleague a daughter's wedding ceremony. Draft a reply letter expressing your inability to accept the invitation and also cite a reason for refusal.

E. You are Anand/Aarti Singh Sindhu of 14, Model Town, Delhi. You have seen an advertisement The Hindu' for the post of Chief Chef in a 5-Star Hotel. Apply for the job with complete bio-dat

F. Students are required to cope with a lot of pressure in today's competitive environment. Write a letter to the Editor of a national daily highlighting the increasing stress faced by students and suggest ways to combat the same. You are Sarvesh/Savita. You can take help from the following visual.

2.Write the main points of the story The Enemy ,The Interview and Aunt Jennifer's Tiger

MATHS

Sample paper of Math’s issued by CBSE (2025-26 session)

SCIENCE

Physics:

Prepare lab manual

Prepare activity file

Prepare a working model based on AC generator/Transformer along with necessary printout**.**

Chemistry:

Physical Chemistry

- Solutions: State Henry's Law and mention two of its important applications. Why do aquatic species feel more comfortable in cold water than in warm water ?
- Electrochemistry: Define molar conductivity and explain how it varies with concentration for both strong and weak electrolytes. A cell reaction is considered spontaneous if the overall electromotive force (EMF) of the cell is positive; comment on this statement.
- Chemical Kinetics: Derive the integrated rate equation for a first-order reaction. Define "activation energy" and explain its significance in a chemical reaction.

Inorganic Chemistry

- d- and f-Block Elements: Describe the general electronic configuration of the d-block elements. Explain why transition metals and their compounds often exhibit catalytic properties and form colored ions.
- Coordination Compounds: Using IUPAC norms, write the formulas for the following: tetra-ammine-diaqua-cobalt(III) chloride and potassium tetra-cyano-nickelate(II). What is the difference between a ligand and a coordination number ?
- p-Block Elements: Draw the structures of XeF2 and H4P2O7. Explain why hydrogen fluoride (HF) has a lower acidic strength than hydrogen iodide (HI).

Organic Chemistry

- Haloalkanes and Haloarenes: Distinguish between SN1 and SN2 reactions with a suitable example for each. How would you convert chlorobenzene to biphenyl ?
- Alcohols, Phenols, and Ethers: Explain why phenol is more acidic than ethanol. How can you obtain phenol from cumene, benzene sulphonic acid, and benzene diazonium chloride ?
- Aldehydes, Ketones, and Carboxylic Acids: Write short notes on the Cannizzaro reaction and the Hoffmann bromamide reaction. Give a chemical test to distinguish between aldehydes and ketones.
- Amines: Arrange C6H5NH2, (CH3)3N, and C2H5NH2 in decreasing order of their basic character in an aqueous solution.
- Biomolecules: What are reducing sugars? Give two examples. What is the denaturation of proteins ?
- Polymers: Differentiate between addition and condensation polymers, providing one example of each.
- Chemistry in Everyday Life: What is a tincture of iodine and what is its primary use ? Why is bithional added to soap ?

Biology:

1. Differentiate between asexual and sexual reproduction. Write any three advantages of sexual reproduction.
2. Describe the process of double fertilization in flowering plants with the help of a neat, labeled diagram.
3. Explain the hormonal regulation of the menstrual cycle in humans.
4. What is contraception? Describe any two barrier methods of contraception.
5. Explain Mendel’s Law of Independent Assortment with the help of a dihybrid cross.
6. Describe the structure of DNA as proposed by Watson and Crick.
7. Explain Darwin’s theory of natural selection.
8. What is AIDS? Write its causative agent, mode of transmission, and preventive measures.
9. What is animal breeding? Explain inbreeding and outbreeding.
10. Explain the role of microbes in sewage treatment.
11. Describe the steps involved in genetic engineering.
12. Explain the production of human insulin using recombinant DNA technology.
13. Define population. Explain any two population attributes.
14. Describe energy flow in an ecosystem. Why are food chains short?
15. Explain in situ and ex situ conservation with suitable examples.

COMPUTER SCIENCE

PREPARE LAB MANUAL (WRITE 22 PROGRAMS WITH OUTPUT INCLUDE PYHTON DATABSE CONNECTIVITY PRIGRAM AND MY-SQL) ALSO PRINT PROJECT FILE ONE PROJECT FOR FIVE STYUDENTS, TAKE A PRINTOUT OF PROJECT FILE AND WRITE ALL THE DETAILS IN FIRST PAGE.

NOTE: PROJECT SENT IN WHATS APP GROUP

PHYSICAL EDUCATION

1. Prepare Lab manual.