SRI RAM KRISHAN DAV PUBLIC SCHOOL, SURIYA, GIRIDIH

WINTER VACATION HOME WORK (2025-26)

CLASS-XI(SCIENCE)

ENGLISH

1.Make a poster on Cleanliness of your surrounding areas.

2.Write an article on 'Reckless Driving of Bike by youngsters which has become the cause of accident on the road 'Suggest some measures to overcome this problem.

3.Write a debate for the motion or against the motion on 'Use of mobile by school children '

4.Write the main contents of the story 'Silk Road,' 'The Birth' and 'The Portrait of the Lady'.

MATHS

Miscellaneous Examples and Exercise of the following chapters

1. Trigonometry
2. Sets, Relation and functions
3. Linear inequality
4. Complex numbers

SCIENCE

Physics:

Write all the NCERT Exercise questions from

1) Units and Measurement
2) Motion in Straight Line
3) Motion in Plane
4) Laws of motion
5)Work, Energy and Power

Chemistry:

Organic Chemistry: Some Basic Principles and Techniques

1. Write the IUPAC names of the following compounds:
    - CH3-CH(CH3)-CH2-CH2-CHO
    - CH3-CH(OH)-CH3
2. Explain the difference between a nucleophile and an electrophile, providing an example for each.
3. What is isomerism? Draw the structural isomers of butane (C4H10).
4. Define and provide an example of the inductive effect.
5. What are carbocations, carbanions, and free radicals? Arrange them in increasing order of stability.
6. Explain the principle of chromatography and its use in the purification of organic compounds.
7. Describe the Lassaigne’s test for the detection of nitrogen in an organic compound.
8. What is a homologous series? Write the first five members of the alkene homologous series.
9. Explain hyperconjugation with the help of an example.
10. Differentiate between substitution and addition reactions with one example of each.

Redox Reactions

11. Define oxidation and reduction in terms of electron transfer.
12. Determine the oxidation number of the underlined element in the following species:

- K<u>Mn</u>O4
- H2<u>S</u>O4

13. What is a disproportionation reaction? Give one example.
14. Balance the following equation by the oxidation number method:
    MnO4- + I- → MnO2 + I2 (in basic medium)
15. Balance the following equation by the ion-electron method (half-reaction method):
    Cr2O7^2- + SO2 → Cr^3+ + SO4^2- (in acidic medium)
16. Identify the oxidizing and reducing agents in the following reaction:
    2Na(s) + H2(g) → 2NaH(s)
17. What is an electrochemical cell?
18. Explain the concept of a redox couple.
19. During a redox titration, what is the role of an indicator?
20. Can we store a copper sulphate solution in a zinc pot? Justify your answer.

Biology:

Instructions:
Write neatly.
Draw diagrams properly.
Answer the following questions:
1.Define photosynthesis.
2.What is respiration?
3.Name the site of photosynthesis.
4.Name the site of respiration.
5.What are plant growth hormones?
6.Write the word equation of photosynthesis.
7.Mention any two differences between photosynthesis and respiration.
8.Name any three plant growth hormones and write one function of each.
9.Draw a simple flow chart showing the main steps of glycolysis. Mention the end product.
10.Draw the Krebs cycle and answer:
a) In which cell organelle does it occur?
b) Name any two products formed during one turn of the cycle.
11.Explain briefly how ATP is formed during the electron transport chain.
12.What is the link reaction? Name the compound that enters the Krebs cycle after glycolysis.
13.Write any two differences between glycolysis and Krebs cycle.

COMPUTER SCIENCE

PREPARE A LAB MANUAL(WRITE 14 PROGRAMS WITH OUTPUT IN PRACTICAL FILE)

PHYSICAL EDUCATION

1. Prepare Lab manual.