SRI RAM KRISHAN DAV PUBLIC SCHOOL, SURIYA Summer Vacation Holiday Homework (Class XII) 2025-26

English:

1.Write the main points of the chapters in your own words.

a. The Last Lessonb.My Mother At Sixty-Sixc.Lost Springd.The Third Levele.The Tiger King

2.Suppose you are the Head Boy of the school. Your school is going to organise Inter House

Computer Science:

Debate competition in your school. Write a notice for school notice board highlighting the details of the competition and asking the names of the participants for the competition from every House.

3.Suppose you are Rohan of Bagodih Suriya, Giridih. Marriage Ceremony of your uncle is going to take place next week. Write an informal invitation to invite all your friends.

- 1. Write a program that returns True if the Input number is an Even number False otherwise.
- 2. Explain the use of Pass statement with examples.
- 3. What are Tokens in Python? How many types of Tokens are allowed in Python?
- **4.** Revise all notes and programs of chapter -1(Python Revision Tour-1) and chapter -2(Python Revision Tour-2).
- **5.** Explain Statements Flow Control.

Science:

Physics:

1)To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.

2) To assemble a household circuit comprising three bulbs, three (on/off) switches, a Fuse and a power source.

- 3) Write the questions answer of NCERT chapters of 1,2 &3.
- 4) Derive the expression of following in A4 size sheets: -
 - I) Derive an expression of electric field intensity due to an electric dipole at a point on axial line and equatorial line
 - II) Derive an expression of torque places in a uniform electric field
 - III) Using gauss theorem derive an expression of electric field intensity due to a solid sphere at a point inside, outside and on the surface of sphere
 - IV) Derive an expression of drift velocity.
 - V) Derive an expression of equivalent EMF in series and parallel combination

Chemistry

1. All the Numerical from Chapter (Solution & Electrochemistry)

Biology:

1. Prepare a project on any one of the sub topics of class 12. Students must prepare a project file containing white A4 size papers and the following details must be covered:

- i. Cover page
- ii. Certificate
- iii. Acknowledgment
- iv. Contents
- v. Introduction
- vi. Body
- vii. Conclusion

viii. Bibliography

2. Complete the NCERT textbooks exercise questions of the following chapters:

- a. Sexual reproduction in flowering plants
- b. Human Reproduction
- c. Reproductive Health
- **3**. Prepare any 10 questions each from the above given chapters and solve it in the biology notebook.

Accounts:

1.Calculate 'Liquidity Ratio' from the following information: Current liabilities = Rs. 50,000 Current assets = Rs. 80,000 Inventories = Rs. 20,000 Advance tax = Rs. 5,000Prepaid expenses = Rs. 5,000 2.X Ltd., has a current ratio of 3.5: 1 and quick ratio of 2: 1. If excess of current assets over quick assets represented by inventories is Rs. 24,000, calculate current assets and current liabilities. 3. Shareholders' funds Rs. 1,40,000 Total Debts (Liabilities) Rs. 18,00,000 Current Liabilities = Rs. 2,00,000. Calculate total assets to debt ratio. 4. From the following details, calculate interest coverage ratio: Net Profit after tax Rs. 60,000; 15% Long-term debt 10,00,000; and Tax rate 40%. 5. From the following information, calculate inventory turnover ratio: Inventory in the beginning = 18,000Inventory at the end = 22,000Maths:

1. Let T be the set of all triangles in a plane with R a relation in T given by

 $R = \{(T_1, T_2) : T_1 \cong T_2\}$. Show that R is an equivalence relation.

2. If R₁ and R₂ are two equivalence relation in a set A, Show that $R_1 \cap R_2$ is also an equivalence relation.

3. Let L be the set of all lines in XY plane and R be the relation in L defined as

 $R = \{(L_1, L_2) : L_1 \text{ is parallel to } L_2 \}$. Show that R is an equivalence relation. Find the set of all lines related to the line y = 2x + 4.

4. Show that the relation S in the set R of real numbers, defined as $S = \{(a,b) : a, b \in R \text{ and }$ $a \le b^3$ } is neither reflexive, nor symmetric, nor transitive.

5. Show that f: N \rightarrow N given by $f(x) = \begin{cases} x+1, & \text{if } x \text{ is odd} \\ x-1, & \text{if } x \text{ is even} \end{cases}$, is bijective (both one – one and onto).

6. Let f: N \rightarrow N be defined by

Net purchases = 46,000Wages = 14,000Revenue from operations = 80,000Carriage inwards = 4,0006.Calculate the Trade receivables turnover ratio from the following information: Total Revenue from operations 4,00,000 Cash Revenue from operations 20% of Total Revenue from operations Trade receivables as at 1.4.2024 40,000 Trade receivables as at 31.3.2025 1,20,000 7. Following information is available for the year 2014-15, calculate gross profit ratio: Revenue from Operations: Cash 25,000 Credit 75,000 Purchases: Cash 15,000 Credit 60.000 Carriage Inwards 2,000 Salaries 25,000 Decrease in Inventory 10,000 Return Outwards 2,000 Wages 5,00

 $f(n) = \begin{cases} \frac{n+1}{2} , & \text{if } n \text{ is odd} \\ \frac{n}{2} , & \text{if } n \text{ is even} \end{cases}$

for all $n \in N$.

State whether the function f is bijective. Justify your answer.

7. Show that the function f: $R \rightarrow \{x \in R: -1 < x < 1\}$ defined by $f(x) = \frac{x}{1+|x|} x \in R$ is

one – one and onto function.

8. Which is greater, tan 1 or tan⁻¹1?

9. Find the value of $\tan^{-1}[2\cos(2\sin^{-1}\frac{1}{2})]$.

10. Find the value of $\tan^{-1}(1) + \cos^{-1}(\frac{-1}{2}) + \frac{1}{2}$ $\sin^{-1}(\frac{-1}{2}).$

11. Express $\tan^{-1}(\frac{\cos x}{1-\sin x}), \frac{-3\pi}{2} < x < \frac{\pi}{2}$ in the simplest form.

12. Write the following function in the simplest form:

 $\tan^{-1}(\frac{\cos x - \sin x}{\cos x + \sin x}), \frac{-\pi}{4} < x < \frac{3\pi}{4}.$

13. Find the domain of the function $\sin^{-1}(3-$ 2x).

14. Find the principal value of $\cos^{-1}(\cos\frac{7\pi}{6})$.

Business Studies:

1.What is meant by management.

2. State any 2 points that prove that the management is a multi-dimensional.

3.A company manufacturing laptops is facing the problems of decreasing sales in the market. You can imagine any product about which you are familiar with. What steps, each level of management should take to give effect to this decision?

4.Explain functions of management.

5. What are the features on Principles of management?

6. What is the importance of the principles of management?

7. The social environment of business is important for a business enterprise.' Explain

8.State any 3 limitations of planning the functions of management.

9.What is the 6 importance of Planning

10.Planning is the basic function of management.' Explain.

Economics:

Solve numericals from Sandeep Garg of Chapter 'National income accounting '