

KAILASH RAI SARASWATI VIDYA MANDIR SENIOR SECONDARY SCHOOL

CLASS-XII (A) SUMMER VACATION HOME-W ORK (2024-25)

## SUBJECT: ENGLISH

1. Answer the following questions:

i) What was Franz afraid of ? ii) What was unusual about the

school that day?

iii) Do you think The Third Level really exists?iv) What was the vow of the Tiger King? Why did he take that vow?

2. Write a letter to the editor of a newsapper regarding inpanitary condition of your town.

3. Write a job application for the post of Marketing Manager with Bio-Data.

SUBJECT: COMPUTER(083)

- 1. Write the types of functions.
- 2. What will be the output of the following program?
  - a) num=1

def myfunc(): Return num print(num) print(myfunc()) print(num)

- b) def display():
   print("hello",end= ' ')
   display()
   print("there")
- c) num=1
  def myfunc():
   num=10
   return num
  print(num)
  print(myfunc())
  print(num)

## SUBJECT: Chemistry

- Vapour pressure of pure water at 298 K is 23.8 mm Hg. 50g of urea (NH<sub>2</sub>CONH<sub>2</sub>) is dissolved in 850 g of water. Calculate the vapour pressure of water for this solution and its relative lowering.
- 2. Calculate the osmotic pressure in Pascals exerted by a solution prepared dissolving 1 g of polymer of mass 185000 in 450 ml of water at 37. C
- 3. Explain the difference between electrochemical & electrolytic cell.

- 4. What is meant by reverse osmosis?
- 5. Explain Rault's law and Hennery law. How Raoult's law is related to Henery Law.
- 6. Write difference between ideal and non-ideal solution.

## SUBJECT: MATHEMATICS

**1**.Let S be the set of all real numbers and let R be a relation in S, defined by  $R = \{(a, b): a \leq a \}$  $b^3$  } .Show that are satisfied none of reflexivity, symmetry and transitivity.

2.Let A=R-{3} and B=R-{1}. Consider the function  $f: A \to B$  defined by  $f(x) = \frac{x-2}{x-3}$ . Show that f is one-one and onto.

4. Find the value of  $sin^{-1}\left(Cos\left(\frac{33\pi}{5}\right)\right)$ 

3. Find the domain of  $sin^{-1}(x^2 - 4)$ 5. If  $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & -2 & 1 \\ 4 & 2 & 1 \end{bmatrix}$ , then show that  $A^3 - 23A - 40I = 0$ 6. Prove that  $tan^{-1}\left(\frac{63}{16}\right) = 1$  $sin^{-1}\left(\frac{5}{12}\right) + cos^{-1}\left(\frac{3}{5}\right)$ 

7. The sum of three numbers is 6. If we multiply third number by 3 and add second number to it, we get 11. By adding first and third numbers, we get double of the second number. Represent it algebraically and find the numbers using matrix method.

8.If A =  $\begin{bmatrix} 2 & -3 & 5 \\ 3 & 2 & -4 \\ 1 & 1 & -2 \end{bmatrix}$ , Find  $A^{-1}$ . Using  $A^{-1}$  solve the system of the equations 2x - 3v + 5z = 11

$$3x + 2y - 4z = -5$$
$$x + y - 2z = -3$$
  
SUBJECT - BIOLOGY

- 1. Draw a labelled diagram of an anther lobe at microspore mother cell stage . Mention the role of different wall layers of anther.
- 2. What are the Assisted Reproductive Techniques practised to help infertile couple? Describe any three techniques.
- 3. Describe the role of pituitary and ovarian hormones during the menstrual cycle in a human female.
- 4. State difference between spermatogenesis and oogenesis.
- 5. Draw a diagram of mature embryo sac of an angiosperm and label the following in it:-(I) filiform apparatus (ii) Synergids (iii)Central cell (iv)Egg (v)Polar nuclei (vi) Antipodal cell cell

## SUBJECT - PHYSICS

EXERCISE -1 QN. 2.1 to 2.15

ग्रीष्मावकाश दिनांक 25 मई 2024 से 19 जून 2024 तक है, पुनः विद्यालय 20 जून 2024 दिन गुरुवार को अपने निधारित समय पर खुलेगा।