

## **ARTIFICIAL INTELLIGENCE- (CBSE)**

- 1- What are the five main stages of the AI Project Cycle, and what is the significance of each stage?
- 2- What do you mean by problem statement template in Problem Scoping? Take an example and make problem statement template.
- 3- How can bias in AI models be identified and mitigated during the development phase?
- 4- What do you mean by Bioethics and also define its principles?
- 5- Why is accountability important in AI projects, and what measures can organizations take to ensure responsible AI deployment?

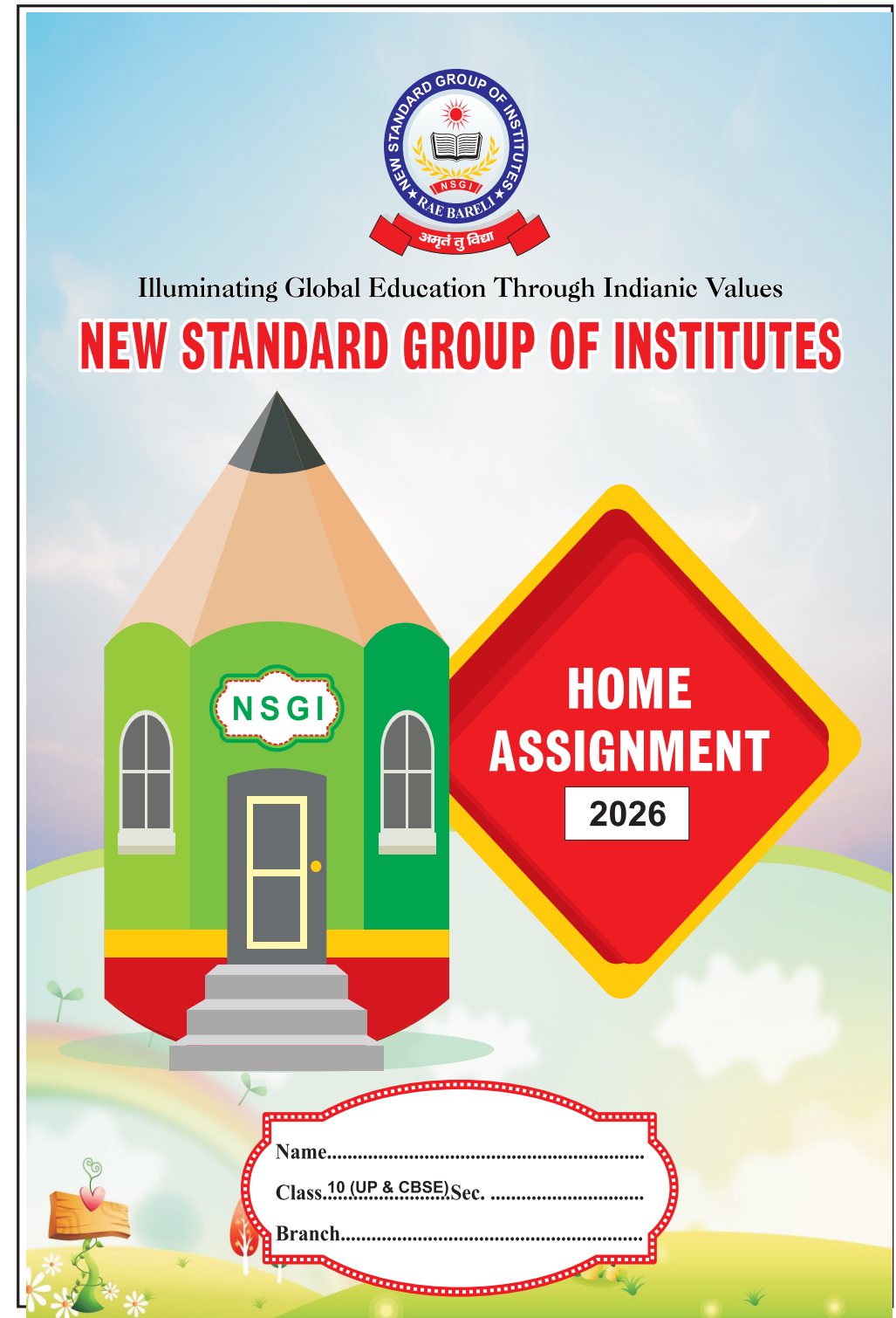
## **COMPUTER (UP BOARD)**

### **Topic-Programming in 'C' (Flow of Control Statements)**

- 1- Write a C program to check whether a number is positive, negative, or zero using if-else statement.
- 2- Write a C program to find the largest among three numbers using nested if statement.
- 3- Write a C program to print all even numbers from 1 to 50 using for loop.
- 4- Write a C program to display the multiplication table of a given number using while loop.
- 5- Write a C program to check whether a number is a prime number or not using loop and if statement.

## **PHYSICAL EDUCATION (Physical Activity Trainer)**

- 1- Make a Feedback sheet of Parents Teachers Meeting.
- 2- Draw the Assembly plan of your School.
- 3- Draft the Invitation letter for Parent-Teacher Meeting.
- 4- Draw the assessment report card of class 7 student.



The poster features the NSGI logo at the top center, which includes a sun, an open book, and the motto 'अभूतं तु विद्या'. Below the logo is the tagline 'Illuminating Global Education Through Indianic Values' and the institution's name 'NEW STANDARD GROUP OF INSTITUTES' in large red letters. The central graphic is a green pencil-shaped building with a door and windows, labeled 'NSGI'. To its right is a large red diamond-shaped sign with a yellow border that reads 'HOME ASSIGNMENT 2026'. At the bottom, there is a decorative red-bordered box containing a form for the student's name, class (Class 10 (UP & CBSE) Sec.), and branch. The background is a colorful landscape with a rainbow, green hills, and a blue sky.

**NEW STANDARD GROUP OF INSTITUTES**

Illuminating Global Education Through Indianic Values

**HOME ASSIGNMENT**

**2026**

Name.....

Class.10 (UP & CBSE) Sec. ....

Branch.....

**Note:1- All the written work is to be done in the fair note book.**

**2- Prepare taught topics in all subjects for test will be held just on reopening of the school.**

**हिन्दी— (CBSE)**

1. 'क्षितिज' पाठ्य-पुस्तक के काव्य पाठों से उपमा, रूपक और उत्प्रेक्षा अलंकार से युक्त दो-दो उदाहरण अपनी व्याकरण की अभ्यास पुस्तिका में लिखिए।
2. आप इंदिरा नगर रायबरेली के निवासी अनुपम/अनुपमा हैं। आपका बचत खाता बैंक ऑफ बड़ौदा में है। नई चेक चुक जारी करवाने के लिए शाखा प्रबंधक को एक पत्र व्याकरण की अभ्यास पुस्तिका में लिखिए।

**हिन्दी— (UP Board)**

1. अपनी पाठ्य-पुस्तक 'नूतन हिंदी' के काव्य पाठों से उत्प्रेक्षा अलंकार, करुण रस तथा रोला छंद के दो-दो उदाहरण अपनी व्याकरण की अभ्यास-पुस्तिका में लिखिए।
2. 'सबसे बड़ा धर्म-परोपकार' विषय पर 150 शब्दों में निबंध अपनी व्याकरण की अभ्यास पुस्तिका में लिखिए।

**ENGLISH-(CBSE)-**

- 1- You are Samar/Sameera Gupta, a resident of A-12, Vinayak Apartments. Mayur Vihar-I, New Delhi. While travelling to work, you have seen cars passing by Yamuna River and stopping to throw polythene bags in the river. You are perturbed by this and wish to write to a leading national daily highlighting it.
- 2- Do exercises 47 to 51 of Tense in Grammar Book.
- 3- Do exercise 6 and 7 of Modals in Grammar Book.

**ENGLISH-(UP)**

- 1- Translate Exercise 5 to 10 of topic translation.
- 2- Do exercise 10 to 15 of the topic conversion.
- 3- Write a letter to the Chairman of your Municipal Board requesting him to arrange for cleanliness in you locality.

**MATHS-**

1. Find the least number which when divided by 12, 16 and 24 leaves a remainder of 7 in each case.
2. A forester wants to plant 66 apple trees, 88 banana trees, and 110 mango trees in equal rows in term of the number of trees. Also he wants to make distinct rows of the trees (only type of tree in one row). Find the minimum number of rows required.
3. Prove that  $\frac{1}{\sqrt{2}}$  is an irrational number.

4- Prove that:  $\sqrt{2} + \sqrt{5}$  is an irrational number. Given that  $\sqrt{2}$  is an irrational number.

5- If  $\alpha$  and  $\beta$  are the zeroes of the quadratic polynomial  $ax^2+bx+c$ , then find the values of:

(i)  $\alpha^2 + \beta^2 - \alpha\beta$       (ii)  $\frac{\alpha^2}{\beta} + \frac{\beta^2}{\alpha}$       (iii)  $\alpha^3 - \beta^3$

6- Find the zeroes of the quadratic polynomial  $2x^2 - 5x + 2$ , and verify the relationship between zeroes and coefficients of the polynomial.

7- Find the values of 'k' for which the following pair of linear equations are inconstant:

$(2k - 1)x + (k - 1)y = 2k + 1$  and  $3x + y = 1$

8- If  $49x + 51y = 499$  and  $51x + 49y = 501$ , then find the values of x and y.

9- If 16 is subtracted from twice the greater of two positive numbers, the result is half of the other number. If 1 is subtracted from half the greater number, the result is still half the other number, find the two numbers.

10- A two digit number is obtained either by multiplying the sum of its digits by 8 and then subtracting 5, or by multiplying the difference of the digits by 16 and then adding 3. Find the number.

11- If the roots of the quadratic equation  $(a - b)x^2 + (b - c)x + (c - a) = 0$  are equal, then prove that  $2a = b + c$ .

12- If one root of  $x^2 - x - k = 0$  is the square of other, then find the value of k.

13- A takes 6 days less than B to do a work. If both A and B working together can do it in 4 days, how many days will B take to finish it.

14- A train travels at certain average speed for a distance of 63 Km and then travel a distance of 72 km at an average speed of 6 km per hour more than its original speed. If it takes 3 hours to complete the total journey, what is the original average speed?

15- A farmer wishes to grow a 100 m<sup>2</sup> rectangular garden. Since he has only 30 m of barbed wire, he fences three sides of the rectangular garden letting the compound wall of his house act as the fourth side of the fence. Find the dimensions of the garden.

## **PHYSICS-**

- 1- Why does a mirror reverse left and right, but not up and down? Explain with reasoning?
- 2- You see your face reflected in a spoon. Why does it appear inverted sometimes and erect at other times?
- 3- A candle is placed in front of a concave mirror. Describe how the image changes as you move the candle closer.
- 4- Why are convex mirrors used as rear-view mirrors in vehicles? Explain with advantages.
- 5- What does a pencil dipped in water appear bent? Explain using refraction.
- 6- What happens to light when it passes from air into glass? Explain direction change in simple words.
- 7- Why is it dangerous to look directly at the Sun through a magnifying glass?
- 8- Design a simple experiment at home to demonstrate reflection of light.
- 9- If light did not bend while passing through different media, how would our daily life be affected?
- 10- One-half of a convex lens is covered with black paper. Will this produce a complete image of the object? Verify your experimentally. Explain your observations.

## **CHEMISTRY-**

- 1- You are provided with two containers made up of copper and Aluminium. You are also provided with solutions of dilute HCl, dilute  $\text{HNO}_3$ ,  $\text{ZnCl}_2$ , and  $\text{H}_2\text{O}$ . In which of the following containers can these solutions be kept and why?
- 2- Rupali bought silver jewellery and she used it regularly. After some days, jewellery lost its shine and became black in colour. Her friend Swapna advised her to clean it with toothpaste. Why does silver jewellery turn black after use? How does toothpaste clean the silver jewellery?
- 3- Hydrated ferrous sulphate crystals are heated in a boiling tube for a few seconds. Water droplets are seen in the inner side of test tube and the colour of the crystal changes. On continuous heating a colourless gas "X" with a smell of burning sulphur is evolved and a residue of "Y" is obtained.
  - (A) What is the colour of the crystals before and after mild heating?
  - (B) Identify the "X" and the residue "Y" formed.
  - (C) Write a balanced chemical equation for the above reaction.

- 4- When hydrogen sulphide gas is passed through a blue solution of copper sulphate, the colour of the solution fades and a black precipitate is obtained.
  - (A) Name the type of reaction mentioned above.
  - (B) Write the chemical name of the black precipitate formed.
  - (C) Give the balanced chemical equation for the reaction involved.
  - (D) Why does the colour of the solution fade away?
- 5- During the reaction of some metals with the dilute hydrochloric acid the following observations are made-
  - (A) The temperature of the reaction mixture rises when Aluminium (Al) is added.
  - (B) Some bubbles of gas are seen when lead (Pb) reacts with acid. Explain these observations with suitable reasons.
- 6- Suggest why the surface of magnesium ribbon is cleaned before the ribbon is burnt?
- 7- A white substance is formed on burning Magnesium ribbon. What is the formula of the white substance?
- 8- When this white substance is dissolved in water to produce an aqueous solution what is the nature of the solution? The reaction between magnesium and oxygen can be described in different ways-
  - 9- Explain why the reaction can be described as an oxidation reaction?  
Explain why the reaction can be described as an exothermic reaction?

## **BIOLOGY-**

- 1- "Imagine if your small intestine had no villi". What 3 problems would your body face? Explain with 1 reason each.
- 2- "If stomata stayed open 24/7 in a desert plant". What would happen to the plant? Give 2 effects.
- 3- "You are a RBC travelling from lungs to toes." Describe your journey in 4 steps. Who will you meet on the way?
- 4- "Why does a doctor tap your knee with a hammer during checkup?" Relate it to control and coordination. What if there's no response.

## **SOCIAL SCIENCE-**

### **Map Skill**

- 1- Locate all **History** and **Dams related** map work on a **political map** of India. (Use separate map for both)

### **Creative Questions**

- 2- Compare the **process** of unification of **Germany** and **Italy** with **five points**.
- 3- Describe **Similarities** and **dissimilarities** between **Non Cooperation Movement (NCM)** and **Civil Disobedience Movement (CDM)**

**Note-Creative question work will be done in the History notebook.**