Name : _____

The Ideal New Star English School
Varanasi
Homework for Summer Holidays
Session : 2024-25
Class – X

Kids, the much awaited holidays are here and it's time to play and have fun!! We have planned some work for you to make the optimum use of your energy and give a vent to your creativity so that you continue learning during the holidays.

- ❖ Parents are requested to encourage their ward to do the homework independently.
- ❖ They can help the child if he/she needs help.
- ❖ Creativity and originality of the work will be appreciated.
- ❖ Complete the homework of each subject in a thin notebook, separate report file, stick file or scrapbook as per requirement of the subject and the activity.

Subject - English

General Instruction:
- **Make a separate notebook for holiday homework.**
- **All questions are compulsory.**

1. Write a letter to the Editor, The Times of India, about evoking awareness for the use of solar energy among the citizens of India. You are Daman/Damini from Vijay Nagar, New Delhi.
2. Hari Singh didn't board the express and returned to Anil. Why did he return? On what values does this incidence put light on? (The Thief's Story)
3. Love for freedom is the natural instinct of every living being. Comment. (A Tiger in the Zoo)
4. Describe Lencho's qualities in light of his faith in God. Do you have faith in God like Lencho? Was Lencho's reaction towards post office employees right? (A Letter to God)

हिन्दी

निर्देश–समस्त प्रश्न अनिवार्य है।
1. सूरसागर में कितने पद है? श्रीकृष्ण की किसी एक लीला का वर्णन करो।
2. 'माता का आँचल' पाठ में भोलानाथ व उनके साथियों के तरह ही आप एक बोर्ड गेम बनाइए।
3. 'नवयुग हिन्दी व्याकरण' से पेज 120 से प्रश्न 7, 8 व 9 करो।
4. समस्त रसो पर आधारित संकेत चिन्ह बनाईए।

Mathematics

1. Prove that:
   (i) $\sqrt{2}$ is irrational   (ii) $\sqrt{3}$ is irrational   (iii) $\sqrt{5}$ is irrational
   (iv) $2 + \sqrt{3}$ is irrational   (v) $2\sqrt{3} - 1$ is irrational
2. Find the zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the co-efficients.
   (i) $5x^2 - 4 - 8x$ (ii) $2\sqrt{3}x^2 - 5x + \sqrt{3}$ (iii) $5y^2 + 10y$
   (iv) $x^2 - 2$ (v) $\sqrt{3}x^2 - 8x + 4\sqrt{3}$
3. If α and β are the zeroes of the quadratic polynomial $P(x) = ax^2 + bx + c$, then evaluate –
   (i) $\alpha - \beta$ (ii) $\frac{1}{\alpha} - \frac{1}{\beta}$ (iii) $\frac{1}{\alpha} + \frac{1}{\beta} - 2\alpha\beta$
   (iv) $\alpha^2\beta + \alpha\beta^2$ (v) $\alpha^4 + \beta^4$
4. Find the quadratic polynomial whose sum of zeroes and product of zeroes are –
   (i) $8, 12$ (ii) $0, -1$ (iii) $\frac{5}{2}, 1$ (iv) $\sqrt{2}, \frac{1}{3}$ (v) $\sqrt{2}, -12$
5. Solve Exercise 3.2 and 3.3 of NCERT textbook.

Science

General Instruction:

- **Make a separate thin notebook for holiday homework.**
- **Use thermocol or chart paper wherever required.**

1. List 4 observation that help us to determine whether a chemical reaction has taken place.
2. Why do we store silver chloride in dark coloured bottles? Explain in brief?
3. What happens when an iron nail is put inside the copper sulfate solution? Write balanced equation?
4. Define combination reaction? Name a combination reaction which is also exothermic?
5. Write 5 redox reactions?
6. Define a reversible reaction?
7. What is double displacement & precipitation reaction? Give two examples of each?
8. Write difference between endothermic & exothermic reactions? Give two chemical equations of each?
9. Balance the following reactions:

   $PCl_5 + H_2O \rightarrow H_3PO_4 + HCl$

   $NH_3 + Na \rightarrow H_2 + NaNH_2$

   $HNO_3 + Ca(OH)_2 \rightarrow Ca(NO_3)_2 + H_2O$

   $Na + H_2O \rightarrow NaOH + H_2$

   $S_8 + O_2 \rightarrow SO_3$

   $K + MgBr_2 \rightarrow KBr + Mg$

10. Name two chemical which are responsible for thinning of ozone layer?
11. Draw structure of nephron in your notebook?
12. What is the role of decomposers in ecosystem?
13. Name 10 scientists? Write down their work and achievements (Paste photographs if possible)?
14. Draw structure of Human digestive system/Brain/Kidney/Respiratory system on chart paper or thermocol?
15. Paste 10 leaves of plants & Name them?
16. Write image formation by a concave mirror for different positions of the object?
17. Write difference between reflection & refraction?
18. What is magnification?

Social Science

1. Write a note on"
   (a) Giuseppe Mazzini
   (b) Frankfurt parliament
   (c) The role of women in nationalist struggle.
2. Who were Marianne and Germania? What was the importance of the way in which they were portraised?
3. Describe the cultural process through which nationalism captured people's imagination.
4. 'Indiscriminate use of resources has led to numerous problems'. Justify the statement.
5. Describe horizontal and vertical power sharing in modern democracies.
6. Explain with the help of five example, how development could mean different things to different people.

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