

Summer Vacation Task:

Class: X (BIOLOGY)

- 1. Write down the experiment – “Preparation of stomata from a Dicot leaf” in your Practical copy.**
- 2. Write down the experiment – “Light is necessary for Photosynthesis” in your Practical copy.**
- 3. Write down the experiment – “Carbondioxide is released during aerobic respiration”, in your Practical copy.**
- 4. Compare between the nutrition Amoeba and nutrition in Paramecium.**
- 5. Draw the digestive system of human with proper labelling.**
- 6. Write a note on digestion of Fats in human.**
- 7. What is the role of Villi present in small intestine and large intestine?**
- 8. Draw the labelled diagram of human respiratory system from the textbook.**

SAINIK SCHOOL BHUBANESWAR

CLASS-X SUMMER VACATION TASK SUBJECT-CHEMISTRY

1. Why should a magnesium ribbon be cleaned before burning in air?
2. Write a balanced chemical equation with state symbols for the following reactions :
 - i) Solutions of barium chloride and sodium sulphate in water react to give insoluble barium sulphate and the solution of sodium chloride .
 - ii) Sodium hydroxide solution (in water) reacts with aqueous HCl to produce sodium chloride solution in water.
3. A solution of substance X is used for white washing .
 - i) Name the substance X and write its formula.
 - ii) Write the reaction of the substance X with water.
4. Why does the colour of copper sulphate solution change when an iron nail is dipped in it?
5. Give an example of a double displacement reaction with definition.
6. What happens when dilute HCl is added to iron fillings?
7. What is a balanced chemical equation ? Why should chemical equation be balanced?
8. What does one mean by exothermic and endothermic reactions? Explain with examples.
9. Why is respiration considered an exothermic reaction ?
10. Why are decomposition reactions called the opposite of combination reactions?

SUMMER VACATION TASK

Class-X

Sub- Physics

1. What is light? How is it propagated?
2. Light possess dual character. Explain it.
3. What is light intensity? Write its unit.
4. What are luminous and non luminous objects? Give examples.
5. Mention different properties of light.
6. What is reflection of light? Explain reflection phenomena with a ray diagram.
7. State the laws of reflection. Is this law applicable for sound?
8. State the nature, position and size of the image formed in plane mirror.
9. Draw the ray diagram for image formation in plane mirror for point and linear object.
10. What is a spherical mirror? Write the types of spherical mirror. Also write the nature, position and size of the image formed in spherical mirrors for different position of object.

VACATION TASK
CLASS : X(MATH)

1. For which values of a and b , are the zeroes of $q(x) = x^3 + 2x^2 + a$ also the zeroes of the polynomial $p(x) = x^5 - x^4 - 4x^3 + 3x^2 + 3x + b$? Which zeroes of $p(x)$ are not the zeroes of $q(x)$?
2. Show that $2 + \sqrt{3}$ is an irrational number.
3. Floor of a room is to be fitted with square marble tiles of the largest possible size. The size of the room is $10 \text{ m} \times 8 \text{ m}$. What should be the size of tiles required that has to be cut and how many such tiles are required?
4. Write a quadratic polynomial, sum of whose zeroes is $2\sqrt{3}$ and product is 5.
5. If one zero of the polynomial $5z^2 + 13z - p$ is reciprocal of the other, then find p .
6. Using Euclid's division algorithm, find the HCF of 56, 96 and 404.
7. A boat covers 14 kms in upstream and 20 kms downstream in 7 hours. Also it covers 22 kms upstream and 34 kms downstream in 10 hours. Find the speed of the boat in still water and of that the stream.
8. Show that one and only one out of n , $n + 4$, $n + 8$, $n + 12$ and $n + 16$ is divisible by 5, where n is any positive integer.
9. Prove that $x^2 - x$ is divisible by 2 for all positive integer x .
10. A 2 digit number say z is exactly the four times the sum of its digits and twice the product of the digits. Find the numbers.
11. There are two points on a highway a, b . They are 70 km apart. An auto starts from A and another auto starts from B simultaneously. If they travel in the same direction, they meet in 7 hours, but if they travel towards each other they meet in 1 hour. Find how fast the two autos are.
12. The sum of two children is ' a '. The age of the father is twice the ' a '. After twenty years, his age will be equal to the addition of the ages of his children. Find the age of father.
13. When you add the numbers and the number obtained by reversing the order of its digits is 165. If the both numbers differ by nine, find the number.
14. Find the smallest number which when increased by 20 is exactly divisible by 90 and 144.
15. Find k so that $x^2 + 2x + k$ is a factor of $2x^4 + x^3 - 14x^2 + 5x + 6$. Also find all the zeroes of the two polynomials.
16. Show that the cube of a positive integer of the form $6q + r$, q is an integer and $r = 0, 1, 2, 3, 4, 5$ is also of the form $6m + r$.

- 17.. On a morning walk, three persons step off together and their steps measure 40 cm, 42 cm and 45 cm, respectively. What is the minimum distance each should walk so that each can cover the same distance in complete steps?
18. Using Euclid's division algorithm, find the largest number that divides 1251, 9377 and 15628 leaving remainders 1, 2 and 3, respectively.
19. For any positive integer n , prove that $n^3 - n$ is divisible by 6.
20. A polynomial $g(x)$ of degree zero is added to the polynomial $2x^3 + 5x^2 - 14x + 10$ so that it becomes exactly divisible by $2x - 3$. Find the $g(x)$.
21. If 1 and -1 are zeroes of polynomial $Lx^4 + Mx^3 + Nx^2 + Rx + P$, show that $L + N + P = M + R = 0$.
22. If the product of two zeroes of polynomial $2x^3 + 3x^2 - 5x - 6$ is 3, then find its third zero.
23. If the zeroes of the polynomial $f(x) = x^3 - 12x^2 + 39x + a$ are in AP, find the value of a .
24. 6 men and 10 women can finish making pots in 8 days, while the 4 men and 6 women can finish it in 12 days. Find the time taken by the one man alone from that of one woman alone to finish the work.
25. Given that $\sqrt{2}$ is a zero of the cubic polynomial $6x^3 - 10x - 2\sqrt{x}$, find its other two zeroes.
26. A shopkeeper sells a saree at 8% profit and a sweater at 10% discount, thereby, getting a sum Rs 1008. If she had sold the saree at 10% profit and the sweater at 8% discount, she would have got Rs 1028. Find the cost price of the saree and the list price (price before discount) of the sweater.
27. Prove that if x and y are both odd positive integers, then $x^2 + y^2$ is even but not divisible by 4.
28. A diver rowing at the rate of 5 km/h in still water takes double the time in going 40 km upstream as in going 40 km downstream. Find the speed of the stream.
29. A two-digit number is obtained by either multiplying the sum of the digits by 8 and then subtracting 5 or by multiplying the difference of the digits by 16 and then adding 3. Find the number.
30. Show that 12^n cannot end with the digit 0 or 5 for any natural number n .

CLASS-X GEOGRAPHY

- Q.1. Make a flow chart of the classification of resources.**
- Q.2. What resources are being developed in your surrounding by the community /village ?**
- Q.3. Draw the two pie chart of land use and compare the land use figure.**
- Q.4 On an out line map of India show the distribution of soil type of India.**
- Q.5 Mention three steps of resource planing in India.**
- Q.6 Make a pie chart of land under important relief features.**
- Q.7 Make a list of animal and birds under different categories based IUCN.**

(Pg-15)

**SUMMER VACATION
CLASS X(HISTORY)**

- Q.1: Why did various classes and groups of Indians participate in the civil disobedience movement ?
- Q.2: Make a note on Non-Co-Operation movement.
- Q.3: Why Ganhiji decided to withdraw Non-Co-Operation movement?
- Q.4: Explain the features of the civil disobedience movement .
- Q.5: Write short notes on the following :
- (a) The Simon Comission
 - (b) The image of Bharat Mata
 - (c) Rowlatt Act
 - (d) Mahatma Gandhi's idea on Satyagraha
 - (e) The causes of failure of civil Disobidience movement.

SUMMER VACATION TASK – 2019

CLASS – X – ENGLISH

1. You are Paban and you have been noticing the life style of school – going children frequently. They are going to the school in the morning, gorging on fast food in the canteens and doing homework and study in the evenings. There is no scope for any exercise or physical activity. Keeping this in mind, write a letter to the Editor of a newspaper, suggesting some concrete steps. Following hints are provided for your help. (150 words)

*lazy life style

*defective food habits

*activities restricted to video games and computer

*no scope for any physical activities

2. Increasing population ,fierce competition ,confusing admission policies have led to an increase in the number of unemployed youth. Write an article on the topic ‘ Unemployment : The Biggest Bane of Indian Youth’ in 180 words. You can use the following points.

*overpopulation

*difficult admission norms

*lack of counselling for the future

*increasing expectations of parents and youth

*financial problems

3. Write an article in about 100-120 words on ‘A Library is good for all ----the old and young’. You are B C Natrajan of 120, Anupam Nagar, Delhi. Use the following clues :

- Best place in the School
- Reference books, help books, newspapers etc.
- Don’t have to buy expensive ones
- Books to relax ---- novels, plays, etc.
- Books --- treasure of knowledge
- Spend leisure hours

4. You are John, the Tour in-charge of Royal Public School, Agra. During the summer break, you are planning to organize a tour to a place of historical importance. Write a letter to the National Travel Agency, Agra, enquiring about the charges, facilities and all the other necessary details.

5. Write a letter to the Editor of a local daily, giving your views about rising cases of obesity among young children. You are Lopamudra living at 20, Shakti Enclave, Delhi. (100-120 words)

6. Complete the story in about 150-200 words which begins as the following :

There was a joint family of six members including the grandparents. It was the 77th birthday of the grandmother and the family planned to celebrate

7. Answer the following questions :

(a) How did the hailstones affect Lencho's fields ? What was Lencho's only hope ?

(b) Sketch the character of the Postmaster in the story 'A Letter to God'.

(c) Why did Lencho think of writing a letter to God ? What did he write in the letter ?

(d) Lencho has a great faith in God. Does he have the same kind of faith in man ? Taking examples from the story, describe his attitude towards God and man.

(e) Describe the ironical ending of the story 'A Letter to God'.

8. Read the story about Nelson Mandela from your Reader 'First Flight' and write the theme of the story.

9. Read the lesson 'A Triumph of Surgery' from your Supplementary Reader 'Footprints Without Feet' and note down the main points.

SAINIK SCHOOL BHUBANESWAR 2019-20
VACATION TASK

CLASS- X (HINDI)

१. 'बड़े भाई साहब' पाठ को पढ़कर प्रश्नों के उत्तर लिखिए।
२. 'बड़े भाई साहब' पाठ से १० मुहावरों को खोजकर उनका अर्थ बताते हुए उनका वाक्य प्रयोग कीजिए।
३. कबीर की साखियों को पढ़कर उनका भावार्थ अपने शब्दों में लिखिए।
४. शब्द और पद में उदाहरण सहित अंतर स्पष्ट कीजिए।
५. समास और उसके भेदों की परिभाषा व उदाहरण लिखिए।
६. निम्नलिखित विषयों पर अनुच्छेद लिखिए –
 - क. करत - करत अभ्यास ते जड़मति होत सुजान
 - ख. मन के हारे हार है मन के जीते जीत
 - ग. दहेज : एक अभिशाप
७. पत्र लिखिए –
 - क. अपने क्षेत्र में यातायात की समस्या को बताते हुए परिहन अधिकारी को।
 - ख. बिजली संकट और उससे उत्पन्न कठिनाइयों का वर्णन करते हुए दैनिक जागरण के संपादक को।
८. सूचना लिखिए –
 - क. विद्यालय में आयोजित होने वाली सांस्कृतिक संध्या की सूचना देते हुए विद्यालय कप्तान की ओर से।
 - ख. मरम्मत कार्य के कारण होने वाली बिजली की कटौती को लेकर जिला विद्युत बोर्ड के प्रबंधक की ओर से।
९. निम्नलिखित विषयों पर संवाद लिखिए –
 - क. शहरों में ट्रैफिक की बढ़ती समस्या को लेकर दो नागरिकों के मध्य।
 - ख. योग का महत्त्व को लेकर दो छात्रों के मध्य।
१०. विज्ञापन तैयार कीजिए –
 - क. विद्यालय में बनी मोमबत्तियों की बिक्री के लिए २५ शब्दों में।
 - ख. चाय निर्माता कंपनी की तरफ से मिल रही विशेष छूट पर २५ शब्दों में।

Class X Odia

1- Write all the question's answer of the following lessons :

⇒ Sura sundari.

⇒ Janmabhumi.

2 - Read and write grammer lesson's :

Rudhi O Lokabani, Anubada prakarana, Chanda O alankara,
Sadharana asudhi.

3 - Write essay - Sahitya O samaja, Sahitya O bigyana, Jatiya Sanhati,
Chatra bisrunkhala O tara samadhana, Jautuka eka samajika
kalanaka.

VACATIONAL TASK

CLASS-10(COMPUTER)

1. Fill in the blanks.

- a. A collection of related web pages is called a _____.
- b. A _____ is device that connects two LANS or WANS that may not be similar.
- c. A _____ is a software used to interpret an HTML document to view web pages and navigate around the world wide web.
- d. A _____ is device that finds the shortest path to send the data from source to destination.
- e. A _____ language is used to create a web page.

2. Answer the following:

- a. Differentiate between web page and web site.
- b. What is world wide web? What are the characteristics of world wide web?
- c. What HTTP important for WWW? Name some protocol other than HTTP.
- d. What is IP? What is its role in TCP/IP network such as internet?
- e. Define the terms (i)Hyperlink (ii)Hypertext?