

Summer Vacation Task:

Class IX(Science – Biology)

1. Write down the experiment – “Preparation of onion peel cell” in your Practical copy.
2. Write down the experiment – “Preparation of human cheek cell” in your Practical copy.
3. Write down the experiment – “Identification of plant and animal tissue” in your Practical copy.
4. State the meaning of :
 - a) Plasmolysis
 - b) Endocytosis
5. Differentiate between Eukaryotes and Prokaryotes in terms of :
 - a) Chlorophyll Pigment
 - b) Nucleus
 - c) Chromosomes
6. Draw a labelled diagram of a nucleus.
7. Differentiate between Osmosis & Diffusion.
8. Show the relationship of chromatin network, chromosome, DNA & Gene.

SAINIK SCHOOL BHUBANESWAR

CLASS-IX

SUBJECT-CHEMISTRY

Answer the following questions.

1. Fill in the blanks.
 - (a) The phenomenon of change of a liquid into the gaseous state at any temperature below its boiling point is called.....
 - (b) At room temperature the forces of attraction between the particles of solid substances are.....than those which exist in the gaseous state.
2. What produces more severe burns, boiling water or steam?
3. Define diffusion. Give one example.
4. How does the water kept in an earthen pot become cool during summer?
5. Convert the following temperature to the Celsius scale: 293 K

SUMMER VACATION TASK 2019

PHYSICS

CLASS IX

- 1. Gather good amount of information about any one of the scientists like Newton, Einstein etc / any new scientific inventions / Nobel prize winners biography and make a power point presentation including pictures.**
- 2. Make a short film (video) by showing usage of science in various fields or making people aware of scientific facts / simple science experiments.**
- 3. Write a drama / script with the content 'superstitious beliefs retold by science'**
- 4. Think of / come up with new scientific ideas or new science exhibits or projects which can be used by the school for upcoming science exhibitions**
- 5. Solve all exercise questions of chapter 8 of science text book.**
- 6. Solve all the questions of chapter 8 of science exemplar.**
- 7. Try to read the chapter 'Force and Laws of motion' and write its synopsis.**
- 8. Write any four difference between Displacement and Distance**
- 9. Write any four difference between velocity and speed**
- 10. Write any four difference Rest and Motion, Give examples.**
- 11. Draw the Distance and time graph of an object when an object is in Uniform motion, non Uniform, Object at rest, Constant acceleration motion.**

SAINIK SCHOOL BHUBANESWAR
SUMMER BREAK HOME WORK (2019-20)
CLASS - IX, SUB- MATHEMATICS

SECTION B (ANSWER ALL THE FOLLOWING QUE)

Q-1 FIND THE VALUE OF a & b IF $\frac{3+\sqrt{2}}{3-\sqrt{2}} = a+\sqrt{2}b$.

Q-2 SIMPLIFY: 1) $(3\sqrt{5} - 2\sqrt{3})(3\sqrt{5} + 2\sqrt{3})$

2) $(3-2\sqrt{2})^2$

Q-3 REPRESENT $\sqrt{8.5}$ ON THE NUMBER LINE.

Q-4 REPRESENT $\sqrt{13}$ ON NUMBER LINE.

Q-5 EXPRESS 3.277 IN p/q FORM.

Q-6 WRITE REMAINDER & FACTOR THEROM .

Q-7 IF $x-2$ IS THE FACTOR OF POLYNOMIAL $x^5 - 3x^4 - ax^3 + 3ax^2 + 2ax + 4$ THEN FIND THE VALUE OF a.

Q-8 FACTORISE 1) $64a^3 + 27P^3$ 2) $x^3 - 125y^3$ 3) $(2p+2q-3r)^2$ 4) $x^3 - 23x^2 + 142x - 120$ 5) $y^2 - 7y + 6$

Q-9 FIND THE VALUE OF $55^3 - 25^3 - 30^3$.

Q -10 IF $x-k^2$ IS THE FACTOR OF $x^2 - K^2x + k - 3$ FIND THE VALUE OF k.

Q-11 FIND THE VALUE P(0),P(1),P(-2).

$P(x) = 10x - 4x^2 - 3$ $P(Y) = (y+2)(y-2)$

Q-12 WRITE AND LEARN ALL THE FORMULAE OF CHAPTER 1&2.

SECTION B (ANSWER ALL THE FOLLOWING QUE)

Show how $\sqrt{5}$ can be represented on no. line.

Write the following in decimal form and find what kind of decimal each has.

(i) $\frac{36}{100}$ (ii) $\frac{1}{11}$ (iii) $4\frac{1}{8}$ (iv) $\frac{3}{13}$ (v) $\frac{329}{400}$ (vi) $\frac{17}{20}$ (vii) $\frac{15}{60}$ (viii) $\frac{7}{36}$

Find five rational no.s between $\frac{2}{3}$ and $\frac{3}{4}$.

Find five irrational no. between $\frac{3}{7}$ and $\frac{8}{11}$.

Classify the following no's as rational or irrational.

$\frac{329}{400}$ (ii) $\frac{17}{20}$ (iii) 7.4259... (iv) 4.2626 ... (v) $\frac{7}{5}$ (vi) $\frac{2}{3}$

Visualise on number line.

(a) $\sqrt{4.3}$ (b) $\sqrt{8.5}$

Simplify : a) $2^{\frac{2}{3}} \times 2^{\frac{1}{5}}$ b) $\left(\frac{1}{5^3}\right)2$ c) $(64)^{-\frac{1}{3}}$

Rationalise a) $\frac{2}{\sqrt{7}}$ b) $\frac{6+\sqrt{2}}{3-\sqrt{5}}$ c) $\frac{1}{\sqrt{7}+\sqrt{11}}$

CHAPTER – POLYNOMIALS

Factorise the following polynomials:

$$x^4 - x^3 - 8x^2 + 2x + 12$$

$$6x^3 - 17x^2 - 4x + 3$$

$$x^3 + x^2 + 2x - 4$$

$$2x^2 - x^2 - 7x + 6$$

$$6x^3 - 17x^2 - 9x - 4$$

$$6x^4 - 7x^3 - 18x^2 - 13x + 6$$

Divide $p(x)$ by $g(x)$ and check if $g(x)$ is a factor.

$$p(x) = 2x^3 + 9x^2 + 4x - 15, g(x) = 2x + 5$$

$$p(x) = 18x^8 - 15x^3 + 24x^2 + 9x, g(x) = 3x$$

$$p(x) = 2x^3 + 5x^2 + 4x + 1, g(x) = 2x^2 + 3x + 1$$

$$p(x) = 81x^4 - 16x^2 + 32x - 16, g(x) = 9x^2 - 4x + 4$$

Given $p(y) = 14y^3 - 2y^2 + 10y - 7$ find the value of $p(1)$, $p(-1)$, $p(0)$ and $p\left(\frac{1}{2}\right)$.

a) Find value of 'K' if $x - 1$ is a factor of $3x^4 - 4x^3 - 3x + K$.

b) Find value of 'K' if $x - 1$ is a factor of $3x^2 + Kx - 2$.

MAKE A PROJECT ON HISTORY OF THE NUMBER π

SUMMER VACATION TASK-2019-20

CLASS-9 (GEOGRAPHY)

- 1. Describe size of India.**
- 2. Why 82 30 E is selected as standard meridian of India?**
- 3. If you go to Silvassa, which union territory will you be in?**
- 4. What is the unique about the 'Indira Point'?**
- 5. Which countries are land neighbours of India, but are not considered as part of the Indian subcontinent?**
- 6. How are riverine islands formed?**
- 7. Define the term- Islands, Strait, Gulf, Peninsula, Coast**
- 8. Name ten peaks of Himalayas mountain.**
- 9. What are the three types of plates movement on the Earth?**
- 10. On an outline map of India locate the following-**
 - a) Eastern-most and western most longitude of India**
 - b) The place located on three seas**
 - c) Palk strait**
 - d) Islands of India**
 - e) Neighbouring countries**

CLASS IX(HISTORY)

Q1 who was the Napoleon Bonaparte? Name the two laws passed by him.

Q2 what is a "Guillotine"? Who Invented it?

Q3 what was the main aim of National Assembly?

Q4 what do you mean by revolution?

Q5 who was Rousseau? Name any one of his famous word?

Q6 what is the National Anthem of France and who composed it.

Q7 what were the taxes that the peasants and other people in the third Estate were expected to pay to the state and the church?

Q8 what were the invention of the constitution of 1791 that was drafted by National Assembly.

Q9 what was the main demand of the women in the French revolution? What was the reaction to the constitution of 1791?

Q10 what was the impact of French revolution on the world?

Q11 who was "Olympe de gouges" what role did she play for woman's rights?

Q12 what were the meaning of the following symbols

Broken chain, Scepter, Blue-White-Red, Bundle of rods, red Phrygian cap and the winged woman.

Q13 what was the impact of the French revolution in France.

Q14 why did "Olympe de gouges" criticize the 1791 constitution.

Q15 what step did she take to demonstrate her criticism?

Why was she executed?

Q16 Discuss the main social classes in France.

Q17 Discuss the rise of Napoleon Bonaparte?

Q18 why was his rule famous as the Reign of terror?

Q19 How did Robespierre meet his end?

Q20 what was the social structure of France before revolution in 1789?

CLASS: IX (ENGLISH)

WRITING:

1. You are Pankaj/ Priyanka, living in the students' hostel of Teresa's Mission School, Mumbai. Write a letter to your brother, telling him of an interesting weekend you spent at your friend's house. (100 words)

2. Your school provides facilities for evening coaching classes for sports. You are interested in joining these classes. Write an application to your sports teacher requesting her to permit you to join. Do not exceed 100 words. You are Shyam Sunder Shyama of Arya School, Patna.

3. Our Planet Earth is in danger as man indiscriminately cuts down forests causing natural ecosystems to break down. Write an article on the importance of trees for man's survival.

4. Thousands of kids across the country are making fast foods a staple of their daily lives at the expense of the nutritious food they need if they are to have healthy futures. The matter has taken a serious turn as for many this intake of junk food coupled with lack of exercise is leading to obesity, high blood pressure, diabetes and heart problems at an early age. Write a short paragraph on 'Growing Junk Food Menace in India' in about 120 words.

GRAMMAR: Make notes of the following grammar items with examples.

1. Modals and their use

2. Use of Passive

3. Clause: Noun clause and Adverb Clause.

READING/Listening: Write the review of an English Book/Movie recommended by your Parents/Teacher.

VACATION TASK

CLASS- 9 (HINDI)

१. १०० शब्दों में अनुच्छेद लिखो -

क. मित्रता

ख. वृक्षारोपण

ग. होली

घ. प्रदूषण

ङ. भारत में आतंकवाद

२. १०० शब्दों में पत्र लिखो -

क. कुसंगति से बचने की सलाह देते हुए अपनी छोटी बहन को पत्र ।

ख. अपनी किसी गलती की वजह से नाराज़ पिता से क्षमा माँगते हुए पत्र ।

ग. अपने विद्यालय की विशेषता बताते हुए अपने मित्र को पत्र ।

३. संवाद लिखो -

क. अपने जन्मदिन पर आमंत्रित कर रहे एक मित्र की दूसरे मित्र से बातचीत ।

ख. बच्चों की अनुशासनहीनता को लेकर दो शिक्षकों के बीच बातचीत ।

ग. बस कंडक्टर और यात्री के बीच बातचीत ।

४. विज्ञापन बनाओ -

क. पत्रिका

ख. मोबाइल

ग. साड़ियाँ

५. अनुस्वार , चंद्रबिंदु और नुक्ता वाले १०-१० शब्द लिखो ।

६. किन्हीं २० शब्दों के वर्ण-विच्छेद करो ।

७. गिल्लू पाठ के प्रश्न-उत्तर लिखो ।

Class IX Odia

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

⇒ Kahamukha Anai Banchibi.

⇒ Padma.

⇒ Budha Sankhari.

2 - Write grammer lesson's Sabda. (According to the instruction given in the class.)

3 - Swara sandhi, Byanjana sandhi and Bisarga sandhi with examples.

4 - Write essay - Bharatiya ganatantra, Banyajantu sanrakhyana, Paribesa surakhya, Adarsha chatrajibaba.

CLASS-9(COMPUTER)

1. Fill in the blanks.

- a. Processed data is referred to as _____.
- b. Data is entered into the computer through a/an _____ device.
- c. _____ device manage and coordinates the entire computer system.
- d. _____ device is used to execute arithmetic and logical operation.
- e. _____ memory is used to store data permanently.

2. Answer the following :

- a. Differentiate between the characteristics of primary and secondary storage of a computer system.
- b. What are the basic components of the CPU of a computer system? Describe the roles of each of the components in the functioning of a computer system.
- c. What is system? Why is a computer often referred to as a computer system.
- d. Differentiate between high level and machine level language.