SUMMER HOLIDAY HOMEWORK 2024-25
CLASS- IX

ENGLISH :

i. Life account of any 5 poets from your English text book.

ii. Write a story on your experience of holidays.

MATHS:

1. Solve $\sqrt{12} \times \sqrt{15}$

2. Solve the following.   (i) $\sqrt[12]{(X^4)^{\frac{1}{3}}}$ (ii) $x^{\frac{12}{7}} \times x^{\frac{7}{12}}$ (iii) $\left(\sqrt{x^3}\right)^{\frac{2}{3}}$

3. Find the value of $0.\overline{2} + 0.\overline{22}$

4. Find the value of $(32)^{\frac{1}{5}} + (-7)^0 + (64)^{\frac{1}{2}}$

5. Find the product of $\left(\sqrt{\frac{3}{5}} + \sqrt{\frac{5}{2}}\right)$ and $\left(\sqrt{5} + \sqrt{2}\right)$

6. Express $0.6 + 0.\overline{7} + 0.\overline{47}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$

7. Rationalize the denominator of $\frac{3\sqrt{5} + \sqrt{3}}{\sqrt{5} - \sqrt{3}}$

8. Simplify: $\left(\sqrt{5} + \sqrt{2}\right)^2$

9. If $x = 4 - \sqrt{15}$, then the value of $\left(x + \frac{1}{x}\right)$

10. Find the value of $x^{a-b} \times x^{b-c} \times x^{c-a}$

(PHYSICS)

1. A particle is moving in a circle of diameter 5m. Calculate the distance covered and the displacement when it competes 3 revolutions.

2. A body thrown vertically upwards reaches a maximum height 'h'. It then returns to ground. Calculate the distance travelled and the displacement.

3. A body travels a distance of 15m from A to B and then moves a distance of 20m at right angles to AB. Calculate the total distance travelled and the displacement.

4. An object is moving in a circle of radius 'r'. Calculate the distance and displacement (i) when it completes half the circle (ii) when it completes one full circle.

5. An object travels 16m in 4s and then another 16m in 2s. What is the average speed of the object?

6. Vishnu swims in a 90m long pool. He covers 180m in one minute by swimming from one end to the other and back along the same straight path. Find the average speed and average velocity of Vishnu.

7. In along distance race, the athletics were expected to take four rounds of the track such that the line of finish was same as the line of start. Suppose the length of the track was 200m. (a) What is the total distance to be covered by the athletics? (b) What is the displacement of the athletics when they touch the finish line? (c) Is the motion of the athletics uniform or non-uniform? (d) Is the displacement of an athletic and the distance covered by him at the end of the race equal?

8. Amit is moving in his car with a velocity of 45km/hr. How much distance will he cover (a) in one minute and (b) in one second.

9. The odometer of a car reads 2000 km at the start of a trip and 2400km at the end of the trip. If the trip took 8 hr, calculate the average speed of the car in km/hr and m/s.

10. An electric train is moving with a velocity of 120km/hr. How much distance will it move in 30s?

11. A body is moving with a velocity of 15m/s. If the motion is uniform, what will be the velocity after 10s?

12. A train travels some distance with a speed of 30km/hr and returns with a speed of 45km/hr. Calculate the average speed of the train.

13. A train 100m long moving on a straight level track passes a pole in 5s. Find (a) the speed of the train (b) the time it will take to cross a bridge 500m long.

14. A car travels along a straight line for first half time with speed 40km/hr and the second half time with speed 60km/hr. Find the average speed of the car.

(CHEMISTRY)

Que-1 Explain why; diffusion occurs more quickly in a gas than in a liquid.

Que-2 When a crystal of potassium permanganate is placed at the bottom of water in a beaker, the water in the whole beaker turns purple on its own, even without stirring. This is an example of:
(a) distribution
(b) intrusion

Que-3 What do you understand by the term 'latent heat'? What are the two types of latent heat?

Que-4 Why is heat energy needed to melt a solid? What is this heat energy called?

Que-5 Why is solid carbon dioxide known as dry ice?

Que-6 Why does the temperature remain constant during the melting of ice even though heat is supplied continuously?

Que-7 Why does the temperature remain constant during the boiling of water even though heat is supplied continuously?

Que-8 Which contains more heat, 1 kg of ice of 0° C or 1 kg of water at 0° C? Give reason for your answer.

Que-9 Why does the temperature of a substance remain constant during the change of state?

Que-10 Why does all the water of the earth not get evaporated during hot summer days?

(BIOLOGY)

- Prepare a model to compare plant cell and animal cell using common household items like grains and pulses etc.
- Do NCERT questions of Chapter: Cell the fundamental unit of life. [in Biology notebook]
- Consider a cell like your school. Each part of the cell (school) has responsibilities that must be done and certain organelles (people) to do them. Identify the functions of the following parts of the cell then identify which person does the same job.

First one is done as an example to follow:

S. N.	ORGANELLE	FUNCTION	Part of School that has a similar function
1.	Cell Membrane	Controls what goes in and out of the cell	Front office
2.	Mitochondria		
3.	Nucleus		
4.	Ribosome		
5.	Cytoplasm		
6.	Golgi Body		
7.	Cell Wall (only in plant cell)		

- Write the functions of SER and RER respectively.
- Name the types of plastids. What are they found in plant cell?

COMPUTER :

1. What is the role of the sender in the communication process?

2. Define encoding in communication.

3. What are ideas in the context of communication?

4. Explain the process of decoding in communication.

5. How does feedback contribute to the communication cycle?

6. How does the size of an organization influence communication methods?

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7. Why is technology support important in communication?

8. Define verbal communication.

9. What are the two types of verbal communication mentioned?

10. What factors contribute to effective oral communication?

11. What is the main disadvantage related to legal validity in oral communication?

12. Why is miscommunication a challenge in face-to-face communication?

13. Name some purposes of public speaking.

14. Why is confidence crucial in public speaking?

15. How does body language contribute to effective public speaking?

16. Why is maintaining eye contact considered important?

17. How does proxemics relate to non-verbal communication?

18. Prepare a file write an Essay on topic "Future of computer" in about 1000 words.

HINDI :

i. हिंदी परियोजना कार्य हेतु फाइल तैयार करें विषय (समास या अलंकार) ।

ii. हिंदी पाठ – 2 (गद्य एवं पद्य) के शब्दार्थ लिखें एवं याद करें ।

iii. कहानी लेखन के अंतर्गत मेरा प्रिय मित्र नामक विषय पर कहानी लिखें ।

iv. अलंकारों (उपमा, रूपक, यमक, अनुप्रास) की परिभाषा उदहारण सहित लिखें ।

v. 'मेरा प्रिय कवि' नामक शीर्षक पर एक अनुच्छेद लिखें ।

SST:

History –Prepare a project file of major events of 'The French Revolution'.

Geography-On the outline political map of India locate the following-
Mountain Ranges – The Karakoram, The Zasker, The Shivalik, The Aravali, The Vindhya, The Satpura, Western & Eastern Ghats.

Mountain Peaks- K2, Kanchanjunga, Anai Mudi.

Plateau – Deccan Plateau, Chhota Nagpur Plateau, Malwa Plateau.

Civics- Prepare a 3D model of Democracy.

Economics- Prepare a chart to show sector of economy (Primary, Secondary, Tertiary) with their pictures.

Complete your Holiday Homework in Separate Note Book.

Note:- Summer holiday homework is available on school website:- www.santkarshnipublicschool.in and respective classes whatsapp groups.

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