

KC GURUKUL PUBLIC SCHOOL JAMMU



HOLIDAYS HOME WORK

SESSION 2019-20

CLASS: IX



“Days of fun, now not in a bun, Summer Holidays

Are a pleasure And children’s treasure.

Holidays are time when you can connect with your child in many ways. As parents are the first and the most important teacher for a child, we can encourage our child to participate in many educational activities at home and promote his/her quest to learn. Working together will not only help your child to build, learn and develop his/her skills but also strengthen your bond with him/her.



INSTRUCTIONS FOR PARENTS



- ❖ **Holiday homework has to be done under the parental guidance.**
- ❖ **Make your ward read newspapers, magazines, story books etc.**
- ❖ **Make your ward learns and remember his/her parents mobile/landline number, house address etc, to make him/her independent and secure.**
- ❖ **Do not miss to take your child, outdoors in the evening.**
- ❖ **Do any creative act, which you are good at with your ward and send it to school after vacations.**
- ❖ **Fix up a time table for your ward to organize his/her daily routine like, watching television, playing with friends, studying etc.**
- ❖ **Make your child responsible by assigning some of the household responsibilities to him/her like, watering plants, arranging the dining table, organizing his/her room and cupboards, fill the empty water bottles and put them in refrigerator.**

Above mentioned guidelines will help your child to become a smart and an active learner.



ENGLISH

Do unit 1 to unit 7 from the book 'words and expressions' (workbook in English for class ix by n.c.e.r.t)

Units are to be solved on the book and not on a separate notebook.

SCIENCE

Chemistry

Chapter covered:

1. Matter in our surroundings

Q1:- On suffering from high fever, which will lower your body temperature more-ice or cold water?
Give reason for your answer.

Q2:- Explain the inter-conversion of three states of matter in terms of force of attraction and kinetic energy of the molecules.

Q3:- State one similarity and two differences between boiling and evaporation.

Q4:- Describe an activity to show that particles of matter have spaces between them.

Q5:- List any two properties of liquids which are common to gases.

Q5:- Why does a gas fill completely the vessel in which it is kept?

Q6:- Suggest a method to liquefy atmospheric gases.

Q7:- Convert the following temperatures to Celsius scale:-

- a) 453k b) 273k c) 527k d) 25k

Q8:- Sponge is a solid and still we are able to compress it. Why?

Q9:- Which characteristic of a gas is used in supplying oxygen cylinders to hospitals?

Q10:- Draw a diagram to show the arrangement of particles in a solid, liquid and a gas.

Q11:- Draw a flow diagram showing the inter-conversion of states of matter. Label the diagram completely.

Q12:- Why do we sprinkle water on the roof or open ground in summer?

Q13:- Why do surgeons often spray some ether on skin before performing minor surgery?

Q14:- When a player gets injured during a game, ethyl chloride is sprayed on the injured portion. Why?

Q15:- Why is ice rubbed on a burnt part of the skin?

Biology

Chapter covered:

1. The fundamental unit of life

Q1:- What are the different kinds of plastids? Write their functions.

Q2:- What is the importance of vacuoles in a cell?

Q3:- Why does the skin of your finger shrink when you wash clothes for a long time?

Q4:- A person takes concentrated solution of salt, after sometime, he starts vomiting. What is the phenomenon responsible for such situation? Explain.

Q5:- If you are provided with some vegetables to cook. You generally add salt into the vegetables during cooking process. After adding salt, vegetables release water. What mechanism is responsible for this?

Q6:- What happens to R.B.Cs when they are placed in

(i) Hypotonic solution (ii) hypertonic solution (iii) isotonic solution

Q7:- Why are chloroplasts commonly called 'kitchen of the cell'?

Q8:- Draw a labelled diagram of mitochondrion in section?

Q9:- Differentiate between rough and smooth endoplasmic reticulum.

Q10:- Do you agree that "A cell is a building unit of an organism". If yes, explain why?

Activity:-

1. Make a model:-

- a) Animal cell (roll no. 1-10)
- b) Plant cell (roll no. 11-20)
- c) Compound microscope (roll no.21-30)

Physics

1. ACTIVITY:

I. Find out the distance of your school/ any place from your home. When you go to school/any place from your house, note down the time you take. Calculate the average speed at which you go to school/any place. Prepare a chart showing average speeds while you are moving by:

- (a) Pedestrian (b) a bus (c) a bicycle (d) a scooter/a bike
- (e) a car.

II. Spend a day in an amusement park and indicate all the forces you experience. Indicate the forces involved while taking part in the following events:

- a. Cycle racing (b) Sea – saw (c) Knocking the stump
d. Firing the balloons with a toy gun. (e) Catching iron fish.
- III. **Derive (Graphically):** (i) Position – Time Relation
(ii) Position – Velocity Relation
(iii) Velocity – Time Relation
2. State Newton’s Laws of Motion with minimum two example each.
3. Solve at least 20 Numerical from following Chapters:
(a) Motion (b) Force and Laws of Motion.

HINDI

प्रश्न 1 अनुच्छेद लिखिए-

- (क) मोबाइल सुविधा या दुविधा
(ख) दहेज प्रथा
(ग) योग दिवस

प्रश्न 2 अनौपचारिक पत्र लिखिए-

- (क) अनुशासन का महत्व बताते हुए अपने छोटे भाई को पत्र लिखिए।
(ख) अपने चाचा जी को पत्र लिखकर आग्रह कीजिए कि वे आपकी आने वाली परीक्षा की तैयारी के लिए आपको विशेष सुझाव देकर आपका मार्गदर्शन करें।

प्रश्न 3 आटो रिक्शा चालक और महिला के बीच लगभग 50 शब्दों में संवाद लिखिए।

प्रश्न 4 'माइग्लो' चेहरे की क्रीम के लिए 25-50 शब्दों में एक विज्ञापन तैयार कीजिए।

प्रश्न 5 कोई दो चित्र चिपकाकर 'चित्र वर्णन' कीजिए।

प्रश्न 6 'आँख' पर आधारित दस मुहावरे लिखकर वाक्यों में प्रयोग कीजिए।

प्रश्न 7 मच्छरों की रोकथाम और बीमारियों से बचाव हेतु एक आकर्षक पोस्टर तैयार कीजिए।

SOCIAL SCIENCE

Q1. Do Mapwork of Lesson 2, 3 AND 4 (OF BOTH HISTORY AND GEOGRAPHY) given at the end of the chapters.

Q2. Collect information about the following posts. Also collect pictures of the persons who hold these posts.

- a) Speaker of **Loksabha**.
b) Chairman of **Rajya sabha**.
c) Leader of the ruling party.
d) President of our country.
e) Governor of the state.

Q3. Collect information about **Article 370 in J&K** and write about it. (On A4 size coloured sheet.)

Q4. Learn all the terms to know of LESSON 2, 3 And 4(as per syllabus) of history and write these terms on History notebook.

Q5. Write a note on the health infrastructure over the years. (special refrence to Jammu and Kashmir)

COMPUTER SCIENCE:

Create a presentation on the topic “**BASICS OF COMPUTERS**”

MATHS

1. If the polynomial $p(x)$ is divided by $ax+b$, then what is the remainder by Remainder Theorem?

2. If $p(x) = 6x^2 - x + 1$ and $q(x) = x^2 + x + 1$, then find $\frac{p(1)}{q(1)}$

3. Find the value of $\frac{\sqrt{2}}{2+\sqrt{2}}$ to three places of decimal, if it is given that $\sqrt{2} = 1.414$.

4. Factorize $x^2 + y^2 + 6y - 9$ using suitable identity.

5. If $a+b=10$ and $ab=21$, find the value of a^3+b^3 .

6. If $x^5 - 3x^4 - ax^3 + 2ax + 4$ is divisible by $(x-2)$ then find the value of a .

7. If both a and b are rational numbers, find the values of a and b in each of the following given equality: $\frac{\sqrt{5}+\sqrt{3}}{3\sqrt{2}-2\sqrt{3}} = a - b\sqrt{6}$.

8. Find three rational numbers between $\frac{-6}{5}$ and $\frac{1}{9}$.

9. Find the decimal representation of:

a) $\frac{-16}{45}$

b) $\frac{327}{500}$

10. Without dividing, state what kind of decimal representation the following rational numbers have:

a) $\frac{7}{8}$

b) $\frac{4}{15}$

c) $\frac{-22}{99}$

11. Express each of the following decimals in the form $\frac{p}{q}$, $q \neq 0$

___ a) 0.35

b) 1.27

c) 23.43

d) 0.453

12. Insert a rational and irrational number between the following:

a) $\sqrt{2}$ and $\sqrt{3}$

b) $\sqrt{3}$ and $\sqrt{5}$

13. Give two rational numbers between

0.2323323332333323333322333333... and 0.212212221222212222212222221...

14. Find a rational and an irrational number between 0.1 and 0.2.

15. Represent $\sqrt{10.5}$ on the number line.

16. If both a and b are rational numbers, find the values of a and b in the equality:

$$\text{a) } \frac{5+\sqrt{3}}{7-4\sqrt{3}} = 47a + \sqrt{3}b$$

17. If $x = \frac{2+\sqrt{3}}{7-4\sqrt{3}} + \frac{2-\sqrt{3}}{2+\sqrt{3}} + \frac{\sqrt{3}-1}{\sqrt{3}+1}$, find the value of $x^2 + \left(\frac{253}{x}\right)^2$

18. Show that $\sqrt{5}$ is an irrational number.

19. State Remainder Theorem and Factor Theorem.

20. Using Factor Theorem, factorize the following:

$$\text{a) } 2x^3 - 3x^2 - 8x - 3$$

$$\text{b) } x^3 + 13x^2 + 31x - 45$$

21. Show that $(x+1)$ and $(2x-3)$ are factors of $2x^3 - 9x^2 + x + 12$.

22. Factorize the following using identities:

- i. $4x^2 + 12x + 9$
- ii. $x^2 - y^2 + 6y - 9$
- iii. $a^4 - b^4$
- iv. $1 - 2ab - (a^2 + b^2)$
- v. $p^2 + q^2 + 9r^2 + 2pq + 6qr$
- vi. $x^3 - 12x(x-4) - 64$
- vii. $x^3 + 8y^3 - z^3 + 6xyz$
- viii. $x^8 - y^8$
- ix. $3x^2 + 4y^2 + 25z^2 - 4\sqrt{3xy} - 20yz + 10\sqrt{3zx}$
- x. $12x^3 + 27y^3 + 8z^3 - 90xyz$

23. If $z^2 + \frac{1}{z^2} = 14$, find the value of $z^3 + \frac{1}{z^3}$

24. If the polynomial $az^2 + 4z^2 + 32 - 4$ and $z^3 - 4z + a$ leave the same remainder when divided by $z - 3$, find the value of a.

25. In which quadrant does the point $(-4, 3)$ lie?

26. In which quadrants is the ordinate of a point positive?

27. Find the point whose ordinate is 6 and which lies on y-axis?

28. Plot the points A $(2, 0)$, B $(5, 0)$, C $(5, 3)$. Find the co-ordinate of the point D such that ABCD is a square.

29. Find the co-ordinates of the point

I) Which lies on both x and y-axis.

II) Whose abscissa is 5 and lies on x-axis.

III) Whose ordinate is -4 and lies on y-axis.

30. Plot the points and check whether they are collinear or not:

I) (2, 3), (3, 2), (1, -5)

II) (-1, 1), (-3, 3), (-5, 5)

31. Plot the points (5, 5) and (-5, 5) in Cartesian plane, join AB, OA and OB. Name the triangle formed?

32. Find three different solutions for the linear equation $3x+5y = 15$

33. Total cost of a washing machine and colored T.V. set is Rs165000. Write a linear equation in two variables to represent this statement.

34. If the point (2, -3) lies on the graph of the equation $AY = 7x-26$, then find the value of a.

35. Determine the point on the graph of the equation $2x+5y = 20$ whose x co-ordinate is

$\frac{5}{2}$ times its ordinate.

36. Draw the graph of the linear equation $y = \frac{2}{3}x + \frac{1}{3}$ check from the graph that (7, 5) is a solution of the linear equation.

37. Solve the equation $3y-3 = 13-y$ and represent the solution

I) On the number line.

II) In the Cartesian plane.

38. Draw the graph of the equation represented by a straight line which is parallel to the x-axis and at a distance of 3 units below it.

39. Draw the graphs of the equations $x-y = 1$ and $2x+y = 8$. Shade the area bounded by these two lines and the y-axis. Also compute this area.

40. In which quadrant does the point (-7, 3) lie?

ALSO REVISE YOUR MATHS NCERT BOOK.

HAPPY HOLIDAYS.