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HOLIDAY'S HOMWORK FOR SUMMER VACATIONS
SESSION 2021-22

Class IX   **Subject: English**

1. Write 10 sentences of each tense.
2. Write a diary entry on your experience of online classes during lockdown with the reference of the chapter "The Fun They Had"
3. Write bio-sketches of two famous musicians whose life you find inspirational for other.
4. Write a letter to the editor of National Daily your concern about pandemic of covid -19/corona virus, aware public about sanitation and show gratitude towards corona warriors (doctors, police, army etc.).
5. Read English stories or watch two English movies and write a review of the same.
6. Complete your CW and previous assignments.
 Note: you have to do your holidays homework in the same english notebook. .
Happy and safe holidays

CLASS 9th   **SUBJECT:MATHEMATICS**

MATHEMATICS

Project or research analysis play an important role in developing various skills in early stage of education. So the student should prepare a project on any one of these topics during holidays.
(i) Centres of a triangle (centroid, circumcentre, orthocenter, incentre); (ii) Application of Coordinate Geometry; (iii) To find various number patterns in nature such as Fibonacci sequence / Golden ratio.; (iv) Algebraic identities / factorization of a polynomial; (v) Number Games; (vi) Polyhedrons and verification of Euler's formula for polyhedrons; (vii) Pascal's triangle; (viii) Puzzles; (ix) Volume of 3-D shapes; (x) Mathematics made easy (use some interesting tricks to make calculation easier); (xi) Frustum of cone; (xii) Square roots of natural numbers using geoboard; (xiii) Unit of circle; (xiv) Cyclic quadrilaterals.

1. Is 1.010010001 ...... an irrational number? If so, why?
2. Give examples of two irrational numbers, the product of which is
   (i) a rational number (ii) an irrational number
3. Simplify $(5+\sqrt{2})(3+\sqrt{5})$.
4. Simplify $\left(\sqrt[3]{x^2}\right)^{\frac{3}{2}}$.
5. Insert two rational numbers between $\frac{2}{3}$ and $\frac{5}{3}$.
6. Simplify $64^{-\frac{1}{3}} \cdot 64^{\frac{1}{3}} - 343^{\frac{2}{3}}$.
7. Write two irrational numbers between $\sqrt{2}$ and $\sqrt{3}$.
8. Find the value of x, if $\sqrt[3]{4x-7} = 5$.
9. Let x and y be rational and irrational numbers, respectively. Is $x + y$ necessarily an irrational number? Give an example in support of your answer.
10. Locate $\sqrt{3}$ on the number line. **[CBSE 2016]**
11. Express 2.5434343 .... in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.
12. Simplify $\frac{\sqrt{6}}{\sqrt{2}+\sqrt{3}} + \frac{3\sqrt{2}}{\sqrt{6}+\sqrt{3}} - \frac{4\sqrt{3}}{\sqrt{6}+\sqrt{2}}$.
13. Evaluate $4 \times (81)^{-\frac{1}{2}} \times \left[81^{\frac{1}{2}} + 81^{\frac{3}{2}}\right]$.

14. Simplify $\left(\frac{3}{5}\right)^4 \left(\frac{8}{5}\right)^{-12} \left(\frac{32}{5}\right)^6 \div \left(\frac{3^4 \times 5^2}{2^6}\right)$.
15. Find the value of $\left(\frac{64}{125}\right)^{-\frac{2}{3}} + \frac{1}{\left(\frac{256}{625}\right)^{\frac{1}{4}}} + \frac{\sqrt{25}}{\sqrt[3]{64}}$.
   [CBSE 2011]
16. Prove that $\left(\frac{x^l}{x^m}\right)^{\frac{1}{lm}} \times \left(\frac{x^m}{x^n}\right)^{\frac{1}{mn}} \times \left(\frac{x^n}{x^l}\right)^{\frac{1}{nl}} = 1$.
17. Locate $\sqrt{10}$ on the number line.
18. If $2^a = 3^b = 6^c$, then find the relation between a, b and c.
19. Given $\sqrt{2} = 1.4142$ and $\sqrt{6} = 2.4495$. Find the value of $\frac{1}{\sqrt{3}-\sqrt{2}-1}$ correct to three places of decimal.
   [CBSE 2014]
20. If $x = \frac{5-\sqrt{21}}{2}$, then prove that
$$\left(x^3 + \frac{1}{x^3}\right) - 5\left(x^2 + \frac{1}{x^2}\right) + \left(x + \frac{1}{x}\right) = 0.$$
   [CBSE 2011]

1. Give an example of a cubic polynomial.
2. Find the degree of polynomial $4x^3 + 9x - 6x^5$.
3. Find the coefficient of x^3 in the expression
   $p(x) = (3x - 4)(x^2 + 5x - 1)$.
4. Find the zeroes of $x^2 - 2x$.
5. Find the value of $346^2 - 345^2$.
6. Classify the following as linear, quadratic, cubic and constant polynomials:
   (i) $5x - 2\sqrt{2}$ (ii) $9 - 8u^2$
   (iii) $8 - x^3 + 2x^2$ (iv) 7
7. Find the zero of the polynomial
   $p(x) = (x - 4)^2 - (x - 6)^2$.
8. By remainder theorem, find the remainder when
   $p(x) = 4x^3 - 3x^2 + 2x - 5$ is divided by $g(x) = 1 - 2x$.
9. If $y + 1$ is a factor of $ky^3 + y^2 - 2y + 4k - 10$, then find the value of k.
10. Factorise:
   (i) $42 - x - x^2$ (ii) $16x^2 + 25 - 40x$

11. Factorise: $2x^3 - x^2 + 13x - 6$.
12. Evaluate the following by using suitable identity:
   (i) 101×99 (ii) 999^3
13. Without actually calculating the cubes, find the value of
   (i) $(-14)^3 + 8^3 + 6^3$
   (ii) $27^3 + (-14)^3 + (-13)^3$
14. If $3x - 2y = 13$ and $xy = 5$, find the value of $27x^3 - 8y^3$.
15. Simplify: $(p + q)^3 - (p - q)^3 - 6q(p^2 - q^2)$.
16. When $f(y) = y^4 - 4y^3 + 8y^2 - my + n$ is divided by $y + 1$ and $y - 1$, we get remainder as 10 and 16 respectively. Find the remainder if $f(y)$ is divided by $y - 3$.
17. If $x^2 - 1$ is a factor of $px^4 + qx^3 + rx^2 + sx + u$, show that $p + r + u = q + s = 0$.
18. If $x^2 + \frac{1}{x^2} = 66$, find the value of $x^3 - \frac{1}{x^3}$.
19. What must be added to $x^4 + 2x^3 - 2x^2 + x - 1$. So that result is exactly divisible by $x^2 + x - 2$?
20. Using factor theorem, factorise the polynomial $x^4 - x^3 - 7x^2 + x + 6$.

CLASS IX   SUBJECT:COMPUTER

DO THIS WORKSHEET IN YOUR COMPUTER NOTEBOOK

A. Fill in the blanks

    i.   _____ is the building block of HTML

    ii.   HTML document must have .html or _____ extensions.

    iii. _____tag is used to write line or text in center.

    iv. _____tag is used to set paragraph.

    v.   To insert image _____tag is used.

B. Find true or false

    i.   HTML tags are case sensitive.

    ii.   <h1><h2>........<h6> tags represent heading tags of different size.

    iii. <p> tag is used to insert new line or insert enter in HTML.

    iv. <img> tag is used to insert images in webpage.

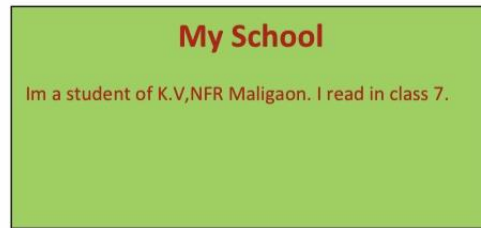   v.   <B> tag is used to make text italics.

C. Short answer question

    i.   What is HTML?

    ii.   Name any two attributes used with the BODY tag.?

    iii. Write the HTML code to set the background color to yellow.?

    iv. How would you insert image in an Html document?

    v.   What does the 'n' in the <Hn> tag indicate?

MAKE THESE HTML PROGRAM

QUESTION NO1:

Q. Write the code to create the following Webpage with background color 'green' and text color 'red'


```
<html>

<head>

<title>My Webpage

</title>

</head>

<body bgcolor ="yellow"  text="red">

<center><h1> My School </h1></center>

<p align=left>Im a student of K.V,NFR Maligaon. I read in class 7. </p>

</body>

</html>
```
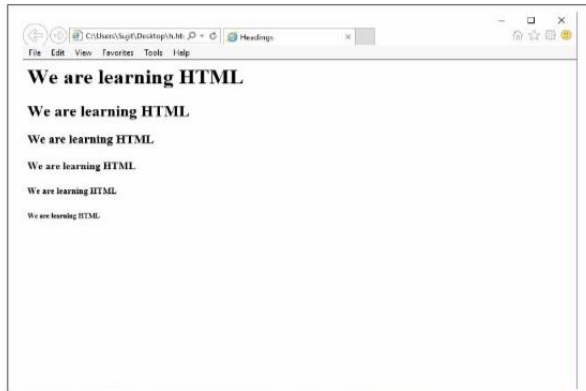
Q. Write an html code to show the working of various Paragraph alignment tags

```
<html>

<head>

<title>

Paragraph in html

</title>

</head>

<body>

This is an html document.

<p align=left>This is a left paragraph in html </p>

<p align=right>This is a right paragraph in html </p>

<p align=center>This is a center paragraph in html </p>

</body>

</html>
```

QUESTION NO2:

1. Ankita has made the HTML document shown below, which displays headings in different Sizes. Write the HTML code for creating a similar document.

Class IX   Subject: SCIENCE

SUMMER VACATION HOLIDAY HOME-WORK

Class - IX

(A) Answer the following :-

1. Ice, water and steam are 3 states of a substance and not different substances.

2. Explain the factors responsible for evaporation.

3. Compare in tabular form the properties of solids, liquids and gases with respect to i) shape ii) volume iii) compressibility iv) fluidity or rigidity v) interparticle forces of attraction

4. i) Name the SI unit of measuring temperature.
   ii) The boiling point of water is 100°c under atmospheric pressure. Convert this temperature in SI units.

5. Write the contribution of following scientists in the study of cell :—
   i) Robert Hooke   iii) Leeuwenhock   v) Schleiden and Schwann
   ii) Purkinje   iv) Robert Brown

6. What are the main functions of each of the following components :
   i) Plasma membrane   iii) Nucleus
   ii) Cytoplasm   iv) Mitochondria

7. Name
   i) An organelle rich in digestive enzymes
   ii) An organelle which has its own genetic material
   iii) An organelle that helps in generating and storing energy.

8. Write 5 points of distinction between plant cell and animal cell.

9. State the reason :—
   i) Why do wet clothes dry quickly in the sun than in shade ?
   ii) Why are lysosomes called suicid 'suicidal bags' of the cell?

10. Explain the interconversion of 3 states of matter with the help of flow chart. Name the process of each conversion ?

(B) PROJECT :—

i) Draw well labelled diagrams of plant cell and animal cell.
ii) Write 10 very short question answers (1 mark each) from chapter 1 & 5
iii) Prepare 10 MCQs from each chapter 1 and chapter 5-
(C) Learn the notes and exercises of chapter 1 and chapter 5.

कथा - सर्ग

① कबीरदास और मुंशी प्रेमचन्द जी के जीवन सम्बन्धी जानकारी प्राप्त करके उनके विषय मे लिखें।

② 15 सुन्दर सुलेख लिखें।

③ व्याकरण मे पढ़ाये गए बिन्दुयो पर रंगीन कार्ड बनाये और लिखें।

④ विद्यार्थी स्वं निर्मित 10 कहानी, कविता लिखें।

⑤ प्रत्येक विद्यार्थीश्चार्ट महामारी सम्बन्धी बनायें।

9th   KV Beholi, Smalkha

Holiday's Home work

→ Do complete your history project 'Azadi ka Amrut Mahostav' related events of 1857 to 1947.

⇒ Write 100 one liner Q/A of two chapters which we have done.

⇒ Re-read the chapter of what is Democracy? Why Democracy?

⇒ Poster making on —
1) Save environment
2) Covid-19 - Lockdown
3) Save girl child

⇒ map work
_____

⇒ All Indian states with capitals
⇒ India's neighbouring countries
) Union Territories.
) Tropic of cancer (8 states)