ASSIGNMENT FOR SUMMER HOLIDAY

SUB. ENGLISH   CLASS: X

Task.1. Illustrate the hardships faced by the brothers; Nicola and Jacopo . Draw or create a flowchart showing the phases of their life from the war affected life to becoming workaholic to save their sister. Label all important locations mentioned in the chapter(Art Integrated task) .

Task.2.Jot down all the unfamiliar words given in the first unit of MCB, and use them in sentences(Refer to the Unit-I, Health and Medicine) .

Task.3. Write a letter to the editor addressing the Growing Mental Health Issues among the Youth.

Task.4. Write diary entries, covering all the important events especially visits or special occasions.

Task.5. Write an article on; Digital Detox for Mental and Physical Health.

Task.6. Read any book of your choice and write its review. You may pick one out of the following: The Story of My Life by Helen Keller, The Diary of A Young Girl by Anne Frank , or Man and Superman by Bernard Shaw.

Task.7. Access the link to study grammatical rules for accuracy and attempt all the exercises related to Tenses and Parts of Speech.

This link navigates you to a renowned book of grammar written by Raymund Murphy:
 https://drive.google.com/file/d/1p7vkOjmNb2FGscyKVGTLspX3P8kq22A_/view?usp=drivesdk

This is for detailed studies:
https://drive.google.com/file/d/17TKtHLHPfYkEjkIGs2BKVMh41zgttWCZ/view?usp=drivesdk

Task.8. Attempt 15 unseen passages shared here:
https://drive.google.com/file/d/1APsbg7KbX_PjZRzbD3hfneWe7_7kYvI9/view?usp=drivesdk

Task.9. Write down the Tone and Mood used in all the stanzas of 'The Frog and the Nightingale' along with the poetic devices.

BIOLOGY

1. Write an activity to demonstrate carbon dioxide is necessary for photosynthesis. Draw the necessary diagrams and label.

2. Write an activity to demonstrate carbon dioxide is released during respiration (topic respiration) or exhaled air contain carbon dioxide.

3. Draw neat and labeled diagrams of :-
   a) Nutrition in amoeba
   b) Human digestive system
   c) Human respiratory system

4. Show the different pathways through which glucose is oxidized to release energy with the help of a flowchart (by aerobic and anaerobic respiration)

5. List any three differences between photosynthesis and respiration.

6. Name the digestive enzymes present in :-
   a) Saliva   b) Gastric juice   c) Pancreatic juice

7. Set up an experiment to study the action of saliva.

8. Name a digestive juice that has no enzymes. What is the role of this juice.

9. Write down the equation of photosynthesis and respiration.

10. Define nutrition
    a) Saprotrophic mode of nutrition.
    b) Holozoic mode of nutrition.
    c) Parasite
    d) Ejestion
    e) Peristalsis

Chemistry:

Q1.

1. In the following experimental setup of electrolysis of water, if P and Q are the gases collected in the test tubes enclosing the electrodes R and S, then select the option/options in which the matching is correct :

(i) P – Oxygen gas , R – Anode
(ii) P – Hydrogen gas , R – Cathode
(iii) Q – Hydrogen gas , S – Cathode
(iv) Q – Oxygen gas , S – Anode

(A) (i) and (ii) (B) (iii) and (iv)
(C) (ii) and (iii) (D) (iii) and (iv)

Q2.

21. A light green coloured solution of sulphate salt of metal 'P' is taken in a beaker, a rod of another metal 'Q' is put in this solution as shown the following figure :

Identify the metals 'P' and 'Q' and write its chemical equation for the reaction that occurs. State the conclusion of this reaction in terms of reactivity series of metals.

Q3. Write balance chemical equation for the reaction that occurs when
a. Steam is passed over red hot iron
b. Natural gas is burnt in air
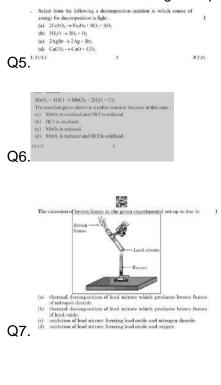c. Glucose reacts with oxygen in the cells of a body and provides energy.

Q4. Write 1 chemical equation each for chemical reaction in which the following change has taken place

i. Change in colour
ii Change in temperature
iii formation of precipitate
Mention the colour change/temperature change.

Q5.

Select from the following a decomposition reaction in which source of energy for decomposition is light :
(a) $2FeSO_4 \rightarrow Fe_2O_3 + SO_2 + SO_3$
(b) $2H_2O \rightarrow 2H_2 + O_2$
(c) $2AgBr \rightarrow 2Ag + Br_2$
(d) $CaCO_3 \rightarrow CaO + CO_2$

1/31/1/1   3   P.T.O.

Q6.

$MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$
The reaction given above is a redox reaction because in this case :
(a) MnO_2 is oxidised and HCl is reduced.
(b) HCl is oxidised.
(c) MnO_2 is reduced.
(d) MnO_2 is reduced and HCl is oxidised.

31/1/1   5

Q7.

The emission of brown fumes in the given experimental set-up is due to

(a) thermal decomposition of lead nitrate which produces brown fumes of nitrogen dioxide.
(b) thermal decomposition of lead nitrate which produces brown fumes of lead oxide.
(c) oxidation of lead nitrate forming lead oxide and nitrogen dioxide.
(d) oxidation of lead nitrate forming lead oxide and oxygen.

Q8.

$MnO_2 + x HCl \rightarrow MnCl_4 + y H_2O + z Cl_2$
In order to balance the above chemical equation, the values of x, y and z respectively are :
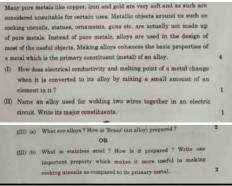(a) 6, 2, 2   (b) 4, 1, 2
(c) 4, 2, 1   (d) 2, 2, 1

Q9
Assertion reason question
Choose the correct option of the following.
A- Assertion is true, reason is true and reason is the correct explanation for assertion
B. Assertion is true reason is true but reason is not the correct explanation for assertion
C. Assertion is true and reason is false
D Assertion is false and reason is true

Assertion -The colour of aqueous solution of copper sulphate turns colourless when a piece of lead is added to it.
Reason-Lead is more reactive than copper and hence displaces copper from its salt solution.
Q10.Source based question

Many pure metals like copper, iron and gold are very soft and as such are considered unsuitable for certain uses. Metallic objects around us such as cooking utensils, statues, ornaments, guns etc. are actually not made up of pure metals. Instead of pure metals, alloys are used in the design of most of the useful objects. Making alloys enhances the basic properties of a metal which is the primary constituent (metal) of an alloy.   4

(I)   How does electrical conductivity and melting point of a metal change when it is converted to its alloy by mixing a small amount of an element in it ?   1

(II) Name an alloy used for welding two wires together in an electric circuit. Write its major constituents.   1

(III) (a) What are alloys ? How is 'Brass' (an alloy) prepared ?   2
                                  OR
(III) (b) What is stainless steel ? How is it prepared ? Write one important property which makes it more useful in making cooking utensils as compared to its primary metal.   2

Biology
Class -IX

1.   Write two functions each of the following cell organelles.
      a) Endoplasmic reticulum
      b) Golgi apparatus
      c) Lysosomes
      d) Mitochondria
      e) Plastids
      f) Vacuoles

2.   Draw neat and labeled diagrams of :
      a) Animal cell   b) Plant cell   c) Prokaryotic cell

3.   Draw diagrams of mitosis and meiosis.

4.   Differentiate mitosis and meiosis in three points.

5.   Carry out the given osmotic activity (chapter 1 - exercise question no. 9)

Physics:

1. Draw the ray diagrams to determine the position, nature, size,magnification if possible in a concave mirror when object is placed

a. at infinity

b. beyond centre of curvature

c. at centre of curvature

d. between centre of curvature and principal focus

e.at principal focus

f. between principal focus and pole.
2. Draw the ray diagrams to determine posi,nature ,size and practical application when an object is placed

a. infinity

b. anywhere on the principal axis.

Note: The assignment to be done on A4 size paper with well decorated front page.

CLASS-10   SUBJECT- SANSKRIT

1-समास-

I - तत्पुरुष एवं नञ् तत्पुरुष समास के दस - दस उदाहरण लिखिए।

II - अव्ययीभाव समास के दस-दस उदाहरण लिखिए।

III-द्वन्द्व समास के दस-दस उदाहरण लिखिए।

2-प्रत्यय-

I - मतुप्, ठक्, ङीप्, टाप् प्रत्ययं के पाँच-पाँच उदाहरण लिखिए।

3-समय-लेखन-

08:00 (.........................)

07:15 (.........................)

06:30 (.........................)

09:45 (.........................)

4- प्रथमः पाठः से पर्याये - पदं, संधि अथवा संधि विच्छेद, प्रश्न - निर्माण, एक-पदेन, पूर्णवाक्येन लिखो।

Social SCIENCE:

Short Answer type questions

1-Describe the ways in which power can be shared among social groups.

2-How did the feeling of alienation develop among the Sri Lankan Tamils?

3-What led to the ethnic tension in Belgium? Why was it more acute in Brussels.

4- Explain any five reforms introduced by Napoleon in the regions under his control.

5- How did the treaty of Vienna 1815 come into being?

6- When and why was Zollverein formed ?

7-Distinguish between a developing country and a developed country.

8-Differentiate between renewable and non – renewable resources of energy.

9-'While average income is useful for comparison,but it may hide disparities.Discuss

10-Describe the different steps of resource planning.

11-Describe any three features of ' Alluvial soil ' found in India.

12-Describe any three features of ' Black soil' found in India.

Long Answer type questions.

1-Suggest any six measures to solve the problem of land degradation in India.

2-Distinguish between red and laterite soils stating five points of distinction.

3-Describe the three steps taken by the French revolutionaries to create a sense of collective identity amongst the French people

4-What led to the emergence of new middle class in Europe?

5-What are some of the basic elements of the Belgium model of power sharing?

6- Describe the path of accomodation adopted in Belgium.What were it's consequences.

Map work

1-On a political map of India draw and colour '' Major Soil types found in India.

विषय -हिंदी

प्रश्न 1. रचना के आधार पर वाक्य के कितने भेद होते हैं? उदाहरण सहित स्पष्ट कीजिये|

प्रश्न 2. उपमा, रूपक, उत्प्रेक्षा, मानवीकरण और अतिशयोक्ति अलंकार की परिभाषा लिखते हुए प्रत्येक के दो-दो उदाहरण भी लिखिए |

प्रश्न 3. पाठ 1 से 3 के कठिन शब्द छाँटकर लिखिए|

प्रश्न 4.नेताजी का चश्मा और बालगोबिन भगत पाठ का सारांश अपने शब्दों में लिखिए|

प्रश्न 5. हेलमेट बनाने वाली एक कंपनी के लिए एक विज्ञापन लिखिए |

प्रश्न 6. पुस्तकालय में नई पुस्तकें मँगाने हेतु प्रधानाचार्य को ई- मेल लिखिए |

प्रश्न 7. बिजली विभाग के अधिकारी को बिजली बिल की शिकायत करते हुए
         पत्र लिखिए|

प्रश्न 8. मित्र को नववर्ष की शुभकामना देने हेतु बधाई संदेश लिखें |

प्रश्न 9. आपकी बड़ी बहन को चिकित्सा महाविद्यालय में प्रवेश प्राप्त हो गया है|
         इस सफलता के लिए बधाई-पत्र लिखिए|

प्रश्न 10. 'पर्यावरण संरक्षण: समय की माँग' विषय पर अनुच्छेद लेखन कीजिये |

        I.   संकेत बिंदु - मानव और पर्यावरण में अटूट संबंध
        II. संरक्षण की आवश्यकता क्यों
        III. संरक्षण की योजनाओं का प्रभाव

ARTIFICIAL INTELLIGENCE:

Unit-I Advance Python

ANACONDA	spyder	jupyter
Leading open data science platform with Anaconda	Free IDE that is included	Create and share documents with live code,visualizations, text, ...powered by Python

INDEX

S. No.	Name of the Program		Sign
1	Write a python program to check whether the given number is prime or not?		
2	Write a python program to implement a simple Chatbot?		
3	Write a python program to generate Calendar for the given month and year?		
4	Write a python program to implement a Simple Calculator program?		
	DATA SCIENCE		
5	Write a program to import data from a CSV file into a pandas program.		
6	Write a program to draw line plots using matplotlib library.		
7	Write a program to draw bar charts using matplotlib library.		
8	Write a program to draw histogram charts using matplotlib library.		
9	Write a program to draw pie charts using matplotlib library		
10	Write a program to draw scatters charts using matplotlib library		
	Computer Vision (OpenCV)		
11	Write a program to read and display image using the opencv cv2 library.		
12	Write a program to read and display original image using the opencv cv2 library.		
13	Write a program to read and display gray color image using the opencv cv2 library.		
14	Write a program to crop the image using opencv cv2 library.		
15	Write a program to resize the image using opencv cv2 library.		

CLASS - X

SUMMER VACATION HOME ASSIGNMENT

Q.(1) Find the LCM and HCF of the following numbers.
(a)   12, 21, 15.
(b)   180, 288, 144
(c)   84, 90, 120
(d)   24, 15, 36.

Q.(2) Given that HCF (306, 657) = 9, find LCM (306, 657)

Q.(3) Find the HCF of 96 and 404 by prime factorisation method. Hence find their LCM.

Q.(4) The LCM and HCF of two numbers are 180 and 6 respectively. If one of the numbers is 30, find the other number.

Q.(5) Find the smallest number that, when divided by 35, 56 and 91 leaves remainders 7 in each case.

Q.(6) Find the greatest number of six digits which is exactly divisible by 24, 15, 36.

Q.(7) Find the largest number that divides 2053 and 967 and leaves a remainder of 5 and 7 respectively.

Q.(8) Prove that $\sqrt{5}$ is irrational number.

Q.(9) Determine the values of P and q so that the prime factorisation of 2520 is expressible as $2^3 \times 3^P \times q \times 7$.

Q.(10) Three numbers are in the ratio 2:5:7. Their LCM is 490. Find the square root of the largest number.

Q.(11) Explain why $7 \times 11 \times 13 + 13$ and $7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 + 5$ are composite numbers.

Q.(12) Check whether 6^n can end with the digit 0 for any natural number n.

PTO

Q(13) Show that following numbers are irrationals.

ⓐ $2 - \sqrt{3}$

ⓑ $3 + \sqrt{2}$

ⓒ $4 - 5\sqrt{2}$

ⓓ $5 + 3\sqrt{2}$

ⓔ $5 - 2\sqrt{3}$

ⓕ $\sqrt{5} + \sqrt{3}$

Q(14) Write whether $\dfrac{2\sqrt{45} + 3\sqrt{20}}{2\sqrt{5}}$ on simplification gives a rational or an irrational number.

Q(15) Find the zeroes of the following quadratic polynomials and verify the relationship between zeroes and coefficients.

ⓐ $x^2 + 7x + 12$

ⓑ $4u^2 + 8u$

ⓒ $4\sqrt{3} x^2 + 5x - 2\sqrt{3}$

ⓓ $x^2 + \frac{1}{6}x - 2$

ⓔ $6x^2 - 3 - 7x$

ⓕ $\sqrt{3} x^2 + 10x + 7\sqrt{3}$

Q(16) If α and β are the zeroes of the quadratic polynomial $P(x) = ax^2 + bx + c$ then evaluate.

ⓐ $\alpha^2 + \beta^2$

ⓑ $\dfrac{\alpha^2}{\beta} + \dfrac{\beta^2}{\alpha}$

ⓒ $\dfrac{\alpha}{\beta} + \dfrac{\beta}{\alpha}$

Q(17) If α and β are the zeroes of $x^2 - x - 4$ find $\dfrac{1}{\alpha} + \dfrac{1}{\beta} - \alpha\beta$.

Q(18) If α and β are the zeroes of polynomial $4x^2 - 5x - 1$. find the value of $\alpha^2\beta + \alpha\beta^2$.

Q (19). Find a quadratic polynomial whose sum and product are given.

ⓐ $\frac{21}{8}$, $\frac{5}{16}$ ⓑ $-2\sqrt{3}$, -9 ⓒ $\frac{1}{4}$, -1

Q.(20) Solve the following system of equations graphically.

$$x + 3y = 6$$
$$2x - 3y = 12$$

Q (21) Solve the system of linear equations graphically
$$2x - y - 4 = 0 \text{ and } x + y + 1 = 0$$
find the points where the lines meet y-axis.

Q (22) Draw the graphs of $2x + y = 6$, $2x - y + 2 = 0$
Shade the region bounded by these lines and
x-axis. Find the area of shaded region.

Q (23) Solve graphically.
$$x + y = 4$$
$$2x - 3y = 3$$

Q (24) Solve the following system of equations.

ⓐ $11x + 15y + 23 = 0$, $7x - 2y - 20 = 0$

ⓑ $0.4x + 0.3y = 1.7$
    $0.7x - 0.2y = 0.8$

ⓒ $\sqrt{2}x - \sqrt{3}y = 0$
    $\sqrt{3}x - \sqrt{8}y = 0$

ⓓ $0.5x + 0.7y = 0.74$
    $0.3x + 0.5y = 0.5$

ⓔ $99x + 101y = 499$
    $101x + 99y = 501$

Q (25) If we add 1 to the numerator and subtract 1 from the denominator, a fraction reduces to 1. It becomes $\frac{1}{2}$ if we only add 1 to the denominator, what is the fraction?

Q (26) Five years ago, Nuri was thrice as old as Sonu. Ten years later, Nuri will be twice as old as Sonu. How old are Nuri and Sonu?

Q (27) The sum of the digits of a two-digit number is 9. Also, nine times this number is twice the number obtained by reversing the order of digits. Find the number.

Q (28) Meena went to a bank to withdraw ₹ 2000. She asked the cashier to give her ₹ 50 and ₹ 100 notes only. Meena got 25 notes in all. Find how many notes of ₹ 50 and ₹ 100 she recieved.

Q (29) The father's age is six times of his son's age. Four years hence the age of the father will be four times of his son's age. find the present ages of son and father.

(30) A and B are two points 150 km apart on a highway. Two cars start from A and B at the same time. If they move in the same direction they meet in 15 hours. But if they move in the opposite directions, they meet in one hour. find their speeds.