



“A vacation helps to relieve stress and boredom, gives us a change of scenery, provides us with adventure, and helps to bring us closer to the people in our lives.”

By :- E. S. Woods

Dear Students,

Warm Wishes!

We pray and wish the best of health and cheerful times to you. Vacations is a time that we all eagerly wait for. We all make plans to enjoy, to relax and to empower ourselves during these days. This summer vacation the holiday homework is designed for you all to achieve the motto of " Fun and Learn".

The activity based assignments will foster curiosity, develop creativity and instill the joy of learning among you all. So, make sure you extract the maximum benefit out of these holidays.

Summer Tips:

- ❖ Start your day with gratitude and prayers.
- ❖ Exercise daily and practice meditation.
- ❖ Assist your mother in household chores.
- ❖ Pledge for "Eat Right"- Less Sugar, Less Oil and Less Salt
- ❖ Wash hands frequently, especially before and after meals
- ❖ Read newspaper daily and stay updated with current affairs.
- ❖ Water the plants and rejoice the beauty of nature

English

1) Book or Movie Review

Review an age-appropriate English book or film including:

Plot, characters, message, favourite dialogue

2) Interview an Elder :Ask grandparents/elders about::

their school life, childhood memories, festivals in earlier times, Then write all information in the form of a paragraph

3) Write and learn: 25 antonyms, synonyms and one word substitutions each. (words may be taken from the text book chapters that are done till now).

4) Prepare a speech on the given topic:

- Social Media and Youth (R.N.1 - 15)
- Role of Youth in National Development (R. N. 16 - 30)
- Importance of Mental Peace (31-45)
- Impact of Technology on Youth (R. N. 46 - last)

5) Activity: (to be done on A.3 sheet) - With pictures and examples

a) Poetic Devices -

- | | | | |
|----------------------|-----------|------------|------------|
| Alliteration. | (1 - 10) | Oxymoron | (11 - 20) |
| Transferred Epithet. | (21 - 30) | Synecdoche | (31- last) |

6) Poster Making -

- 'Save Water Save Life' R.N.1-15)
- Trees- Lungs of the World. (16-30)
- Importance of yoga and Exercise (31-45)
- Communal Harmony (46-last)

7) Write recapitulating points of all the chapters done in literature. (in the form of :

Colourful Mind - map , Flow chart, Web chart, (Include all important events theme message and characters)

8) Draft Advertisements on the given topics: (A 4 sheet)

- a) You are General Manager of Arena Export Company, Mumbai. You want to appoint a Personal Assistant for the company.
- b) You are the Principal of ABC School, Pune. You require Cricket and hockey coaches for your school. Mention - regarding the age, experience, qualification etc.

9) Twist in the Tale - (Any one of your choice)

Physical Education

1. Labelled diagram of 400 metre track and explain 100 metre, 200 metre, 400 metre, 800 metre, and 1500 metre races and show in 400 metre track.

2. Field Events : Shot put, discus throw, javelin throw, long jump, High jump

3. Any one game of your choice out of the list above. Labelled diagram of field and equipment (rules, terminologies and skills) etc.

Handball, Kho kho, Judo, Table Tennis, Football, Lawn Tennis

4. Pictorial presentation of any five asanas.

Maths

SOLVE THE FOLLOWING QUESTIONS IN A SEPARATE NOTE-BOOK.

- Express in radians the fourth angle of a quadrilateral which has three angles $46^{\circ}30'10''$, $75^{\circ}44'45''$ and $123^{\circ}9'35''$.
- Find the domain of the function : $f(x) = \sqrt{4-x} + \frac{1}{\sqrt{x^2-1}}$
- Find the domain and range of the function : $f(x) = \frac{1}{2-\sin 3x}$
- Find the domain of each of the following functions given by
 - $f(x) = \frac{1}{\sqrt{x-|x|}}$
 - $f(x) = \frac{1}{\sqrt{x+|x|}}$
 - $f(x) = \frac{1}{\sqrt{x-[x]}}$
 - $f(x) = \frac{1}{\sqrt{x+[x]}}$
- The perimeter of a certain sector of a circle is equal to the length of the arc of a semi-circle having the same radius. Express the angle of the sector in degrees, minutes and seconds.
- Find in degree and radians the angle between the hour hand and the minute hand of a clock at half past three.
- Prove that : $\cos 510^{\circ} \cos 330^{\circ} + \sin 390^{\circ} \cos 120^{\circ} = -1$
- Prove that $\tan 5\pi/12 + \cot 5\pi/12 = 4$
- If α and β are acute angles such that $\tan \alpha = \frac{m}{m+1}$ and $\tan \beta = \frac{1}{2m+1}$, prove that $\alpha + \beta = \pi/4$
- Prove that : $\cos 20^{\circ} \cos 40^{\circ} \cos 60^{\circ} \cos 80^{\circ} = 1/16$
- Find the domain of the function $f(x) = \frac{1}{\sqrt{1-\cos \cos x}}$
- Find the domain and range of the function $f(x) = \frac{1}{\sqrt{4+3 \sin x}}$
- Find the minimum and maximum value of the function :
 - $\sin^4 x + \cos^2 x$
 - $3 \sin^2 x - 2 \cos^2 x + 9$
- Prove that : $\sqrt{2 + \sqrt{2 + 2 \cos \cos 4x}} = 2 \cos x$
- Draw graphs of all trigonometric functions.

Chemistry

All students have to collect or click pictures from chemistry in daily life and make project report of the same.

Basic concepts of chemistry

- How many moles of NaOH are contained in 27 ml of 0.15 M?
- Calculate the number of atoms in each of the following:
 - 52 moles of He.
 - 52 u of He

- Calculate the molarity of 1 L of solution of ethanol in water in which the mole fraction of ethanol is 0.040.
- If ten volumes of dihydrogen gas reacts with five volumes of dioxygen gas, how many volumes of water vapour could be produced?
- Calculate the molarity of NaOH in the solution prepared by dissolving its 4gms in enough water to form 250mL of the solution.
- The density of 2 molal solution of NaOH is 1.10 g per ml. Calculate the molarity of the solution.
- How many atoms and molecules of phosphorous are present in 124gms of phosphorous (P₄)?
- A 6.9M solution of KOH in water contains 20% by weight of KOH. Calculate the density of solution.
- Calculate the molality and molarity of 1 L solution of 93% H₂SO₄(Wt. /Vol). The density of solution is 1.84g/ml.

Classification of elements & Periodicity in properties

- Which of the following species has the largest and the smallest size : Mg²⁺ , Al , Al³⁺?
- Arrange the given ions in order of decreasing radii ; Li²⁺, Be²⁺ , B³⁺ giving the reason.
- Why is the second ionisation enthalpy always higher than the first ionisation enthalpy?
- Why is the first ionisation enthalpy of 7N exceptionally higher?
- Give the order of the first ionisation enthalpies of Na, Mg, Al and Si. Explain your choice.
- Noble gases have larger size than halogens. Explain.
- Write the IUPAC name and symbol for the element having 119 as the mass number. On the basis of the periodic table, predict the electronic configuration of this element and also the formula of its most stable chloride and oxide.
- The formation of F⁻(g) from F(g) is exothermic whereas that of O²⁻ is endothermic. Explain.
- First and second ionisation enthalpies (IE₁ and IE₂) in kJ mol⁻¹ for a few elements are given

below :

Element.	IE ₁ .	IE ₂
A	419	3051
B	1251.	2297
C	2372.	5250
D	738	1451

Which of the above elements is likely to be

- a reactive metal
- a reactive non-metal
- a noble gas
- a metal that forms a stable oxide of the formula MO?

Redox

Q.1 Solve NCERT Ques no. 1 , 18, 29 and 30.

PROJECT WORK

“Design and develop a working model or Teaching Learning Material (TLM) to demonstrate any one concept of Chemistry used in daily life. Explain the principle, materials used, and its real-life application.”

Examples (Any one can be chosen / of your own choice):

Water purification model – showing filtration and sedimentation

pH indicator kit – using natural indicators like turmeric

Chemical reaction model – e.g., vinegar and baking soda reaction

States of matter model – showing particle movement

Air pollution control model – demonstrating filtration of pollutants

Biology

Do following questions in the separate holiday homework notebook

1 Make an outline of the five kingdom classification: what are the advantages and disadvantages of this classification.

2 compare the silent features of Monera with protista.

3 write the distant characters of fungi.

4 describe the mode of reproduction in fungi.

5 Why are bryophytes called plant amphibians? Why do we call Mosses and ferns as amphibians?

6 Name the different pigments found in various types of algae.

7 Distinguish between gametophyte and sporophyte

mega sporophyll and microsporophyll

antheridia and archegonia

liverwort and mosses.

8 describe the respiratory organs of non chordates.

9 justify the statement mammals are the most successful and dominant animals today.

10 define coelom. Explain two types of coelom formation in animals

11 explain the general characteristics of reptile with respect to respiration excretion and reproduction.

12 What are the characteristics and features of arthropoda why it is called the largest phylum of the animal kingdom?

13 draw the following well labelled diagrams of

a) Internal structure of mitochondria e) Internal structure of chloroplast

b) Fluid mosaic model of plasma membrane

c) Nucleus

d) Internal structure of cilia or flagella.

Working model

14 Make a working model from the following topics or topics of your choice

Digestive system , Respiratory system , Excretory system , Circulatory system

Integumentary system , Working model of DNA , Working model of neuron , Or any other topic of biology

15 Bring one medicinal plant and write down the important characteristics of that plant which explain why it is being used as treatment of diseases.

16 Make herbal soap like aloe vera or rose petal soap

Make moisturizer by using herbal products like aloe vera haldi Tulsi neem

Make one hair wash by using Amla reetha shikakai(Any one)

Music

(Music Project file work)

1. भारतीय संगीत में खुले खुलों व बंद बोलों के ऐसे कोन से ताल है जिनको आप एकगुन या दुगुन में लिख सकते हैं ?
 2. भारतीय संगीत के ऐसे पांच कलाकारों के नाम लिखिए जिनको अब तक पद्मश्री पुरस्कार मिल चुका है
 3. उनके विषय में संक्षिप्त जानकारी विस्तार से लिखिए।
 4. भारतीय संगीत के ऐसे पांच कौन से कलाकार हैं जिनको अब तक पद्म विभूषण पुरस्कार मिल चुका है ? उनका संक्षिप्त वर्णन कीजिए ।
 5. भारतीय संगीत के उन कलाकारों के नाम संक्षिप्त वर्णन किजिये जिनको अब तक भारत रत्न पुरस्कार से नवाजा गया है।
 6. भारतीय संगीत में वाद्य यंत्रों को चार वर्गों में विभाजित किया गया है पहले सुषिर वाद्य दूसरा घन वाद्य तीसरा तंत्र वाद्य और चौथा अवनद वाद्य इन चारों वर्गों के वाद्य यंत्रों का सचित्र वर्णन किजिए ।
- Note:** प्रत्येक वर्ग के वाद्य यंत्र तीन-तीन होने चाहिए
7. निम्नलिखित शब्दों की व्याख्या कीजिए- आरोह, अवरोह, पकड़, वादी स्वर, संवादी स्वर, सप्तक, थाट, स्वरों के प्रकार, चल स्वर, अचल स्वर, वर्जित स्वर आदि ।
 8. मां सरस्वती का चित्र बनाकर यह वंदना लिखिए है हंस वाहिनी ज्ञान दायिनी अंब विमल मत दे इस वंदना को पूरा कीजिए।
 9. निम्नलिखित राग व तालों का संक्षिप्त वर्णन कीजिए राग वृंदावनी सारंग, राग जोनपुरी , राग भीमपलासी , राग बिहाग रूपक ताल, झपताल , एक ताल , चार ताल और तीनताल
 10. निम्नलिखित वाद्यों के वादको का वाद्य साहित सचित्र वर्णन कीजिए- हारमोनियम, सितार, तबला, बांसुरी, शहनाई, संतूर, सारंगी, सरोद।

Hindi

- निर्देश: कार्य साफ-सुथरी लिखावट में करें। परियोजना कार्य फाइल/स्क्रेपबुक में प्रस्तुत करें।
- प्रश्न 1. आरोह पाठ्य पुस्तक के गद्य खंड पाठ (1-4) पढ़कर प्रत्येक से 5 अतिरिक्त प्रश्नों का निर्माण करें।
- प्रश्न 2. मियां नसीरुद्दीन पाठ की सबसे मजेदार घटना का वर्णन अपने शब्दों में लिखिए।
- प्रश्न 3 .आरोह पाठ्य पुस्तक के काव्य खंड की पहली चार कविताएं पढ़कर प्रत्येक से 5 अतिरिक्त प्रश्नों का निर्माण करें।
- प्रश्न 4..अपने बचपन की कोई मजेदार घटना लिखिए।
- प्रश्न 5.. अप्पू का चित्र बनाकर उसके बारे में 5 वाक्य लिखिए।
- प्रश्न 6..कृष्ण एवं मीरा बाई का सुंदर चित्र बनाइए।
- प्रश्न 7. चित्रपट संगीत और शास्त्रीय संगीत का तुलनात्मक चार्ट बनाइए।
- * रचनात्मक कार्य
- प्रश्न 8. निम्नलिखित उपविषयों लगभग 80 से 100 शब्दों में अनुच्छेद लिखिए।
- “ईमानदारी सबसे बड़ी शक्ति है”
- “मेरी गर्मी की छुट्टियाँ”(यात्रा, खेल, पुस्तक पढ़ने या परिवार के साथ बिताए समय का वर्णन कीजिए।)
- ऑनलाइन शॉपिंग: समय की मांग
- क्या नहीं कर सकती नारी

प्रश्न 9.आपने किसी पुस्तक विक्रेता से कुछ पुस्तक मंगवाई थी जो आपको अभी तक नहीं मिल पाई है इस बारे में सूचित करते हुए शीघ्र पुस्तकें भिजवाने हेतु पुस्तक विक्रेता को एक पत्र लिखिए।

प्रश्न 10. अपने गांव में पुस्तकालय एवं वाचनालय खुलवाने हेतु जिला परिषद के अध्यक्ष को पत्र लिखिए।

प्रश्न11. जल निगम के मुख्य अधिकारी के नाम दूषित जल की आपूर्ति पर एक शिकायती पत्र लिखिए।

प्रश्न12. किसी समाचार पत्र के संपादक को एक पत्र लिखिए जिसमें दूरदर्शन के लाभ और हानि का उल्लेख किया गया हो।

* परियोजना कार्य: समाचार पत्र, रेडियो, टीवी और इंटरनेट के चित्र एकत्र करके कोलाज बनाइए।

“सोशल मीडिया के लाभ और हानि” विषय पर तालिका बनाइए।

नोट: आवधिक परीक्षा 2 का पाठ्यक्रम याद कीजिए।

Informatics Practices

Write all answers in a separate notebook/ Assignment notebook.

1. Answer the following questions:-

- i. What is python.
- ii. What does IDLE stand for? What is Python IDLE?
- iii. Python is cross platform language .How?
- iv. Explain any three features of python.
- v. Is python case sensitive.Explain.
- vi. What are tokens?
- vii. What are Keywords?
- viii. What are identifiers and literals?
- ix. What is a variable?
- x. What are the naming conventions of identifiers/variables/literals.
- xi. What is the default separator and terminator in print() function in Python? How can we change it?
- xii. What are the comments? Declare a single-line comment and a multi-line comment.

2. Differentiate between

- | | |
|------------------------------------|-----------------------------|
| i Interactive mode and Script mode | ii Compiler and Interpreter |
| iii Keyword and variable | iv / and // v = and = |

3. Identify valid and invalid variable names from the following:

percentage%, 12class, final-exam, Class, For, _subjects

4. Identity which of the following expressions are correct:

- i x,y,z=12.5, 170, 'Samarth' ii x,y,z=12.5, 170, 'Samarth', k
iii x=y=z=100 iv x,y = 10,10, z = 10 v x,y = 10

5. Give the data type of the following variables:

- i. x= 'Raghav' ii y= 100.56 iii z=10 iv t=15 +6j
v. var1=[120, 130, 140, 'Ajit'] vi. var2=('May', 'June', 5, 6)
vi num=true

6. Determine the type of each of the following:

- i. 42 ii 2 iii '42' iv (4, 2)

7. Observe the following script and enlist all the tokens used in it.

#Identify tokens in the script

```
name="Fatima"  
cl=eval(input("Enter class: "))  
print (name,"studies in", cl,"class")
```

8.What will be the output of the following code?

```
x , y=2,6  
x, y=y, x+2  
print (x, y)
```

9.What will be the output produced by the following code?

```
name = 'Neeru'  
age =21  
print (name, "you are", 21, "now")
```

10.Write Python command to display a message on the screen – “First python Exam”

11. Write the differences between

- a) Grid Computing and cloud computing
- b) Data Capture and Data Storage
- c) IAAS , PAAS and SAAS

12. What is Big Data? Explain all 5V's.

13. What is blockchain technology? Write any 3 applications of it.

14. What is Artificial Intelligence? Explain 1. Augmented reality 2. Virtual reality 3. Robotics.

15 Make a small video of yours with an animated character using any augmented reality.

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