

KENDRIYA VIDYALAYA NO-III JORHAT
Summer Vacation Holiday Homework (2022-23)
Class XII English Core (301)

Home Work: (Use CW copies)

Q1: Read the lesson “The Rattrap” (Flamingo). Do you think the title of the story ‘The Rattrap’ is appropriate? Give reasons within 200 words to support your answer. **10**

Q2: Read the lesson ‘Going Places’ (Flamingo) and write an article on ‘Hero Worshipping’ within 200 words. **10**

Q3: Read the stories ‘The Enemy’ from Vistas and write an article on ‘Patriotism is a part of life’ within 200 words giving instances from the lesson. **10**

Q4: Read ‘Memories of Childhood’ from Vistas and prepare a speech on ‘Golden Days of Childhood’ in about 200 words. You may give instances from the chapter ‘Lost Spring’ too. **10**

Project 1: Interview-Based research (individual) **20**

Step 1: Do research on **any one** of the following topics :

- a) Evolving food tastes in my neighbourhood
- b) Corona pandemic and the fallout on families.

Make a questionnaire based on the preliminary research/ background & take interviews of 5 to 10 people to collect their ideas on the topic (Prepare video of the interview).

Step 2: Prepare a write up on the interview jotting down the questions and replies collected. Then write a report up to 1000 words on your research. Don’t forget to write your comments at the end of your report. (use file papers)

Step 3: Decorate the front page of your Project and submit with the video of the interview.

Project 2: Write, direct and present a theatrical production, /One act play (Group Activity – Group of 4)

This will be a project which will be done as a team. It will involve planning, preparation and presentation. In short, various language skills will be utilised. There will be researching, discussion, writing the script, auditioning and ultimately producing the play. The project will end with a presentation and subsequently a viva. Teachers will be able to assess the core language skills of the students and help them grow as 21st century critical thinkers.

The Project-Portfolio for both the projects:

The Project-Portfolio may include the following:

- Cover page, with title of project, school details/details of students.
- Statement of purpose/objectives/goals
- Certificate of completion under the guidance of the teacher.
- Action plan for the completion of assigned tasks.
- Materials such as scripts for the theatre/role play or questionnaires for interview and other material evidence of learning progress and academic accomplishment.
- The 800-1000 words essay/Script/Report.
- Student /group reflections.
- Video/ Photographs that capture the positive learning experiences of the student(s).
- List of resources/bibliography.

Summer Vacation Holiday Homework (2022-23)

Class XII Physics (042)

1. State the Electrostatic Coulomb law. Write the mathematical expression for it.
2. Derive the expressions for torque and potential energy associated with an electric dipole in uniform electric field.
3. Define Gauss's law. Write the mathematical equation for it.
4. Using Gauss's law, find the electric field due to an infinite line charge distribution and for an infinite plane charged sheet.
5. Discuss on the topic "Electrostatic Shielding".

Summer Vacation Holiday Homework (2022-23)

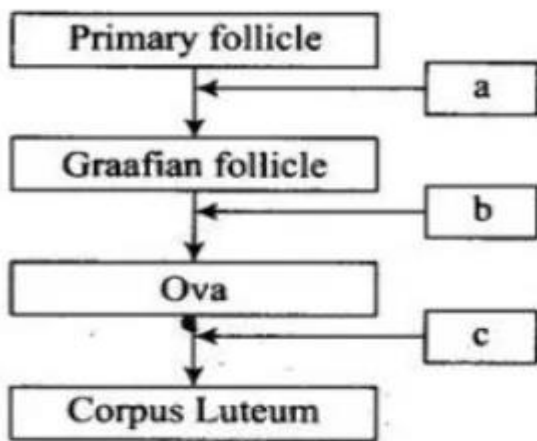
Class XII Chemistry (043)

1. Calculate the mass percentage of benzene (C_6H_6) and carbon tetrachloride (CCl_4) if 22 g of benzene is dissolved in 122 g of carbon tetrachloride.
2. Calculate the mole fraction of benzene in solution containing 30% by mass in carbon tetrachloride.
3. Calculate the molarity of each of the following solutions
 - (a) 30 g of $Co(NO_3)_2 \cdot 6H_2O$ in 4.3 L of solution
 - (b) 30 mL of 0.5 M H_2SO_4 diluted to 500 mL.
4. Calculate the mass of urea (NH_2CONH_2) required in making 2.5 kg of 0.25 molal aqueous solution.
5. H_2S , a toxic gas with rotten egg like smell, is used for the qualitative analysis. If the solubility of H_2S in water at STP is 0.195 m, calculate Henry's law constant.
6. Henry's law constant for CO_2 in water is 1.67×10^8 Pa at 298 K. Calculate the quantity of CO_2 in 500 mL of soda water when packed under 2.5 atm CO_2 pressure at 298 K.

Summer Vacation Holiday Homework (2022-23)

Class XII Biology (044)

1. A human female experiences two major changes, menarche and menopause during her life. Mention the significance of both the events.
2. Corpus luteum in pregnancy has a long life. However, if fertilisation does not take place it remains active only for 10-12 days. Explain.
3. What is foetal ejection reflex? Explain how it leads to parturition?
4. Except endocrine function, what are the other functions of placenta.
5. Why is breastfeeding recommended during the initial period of an infant's growth? Give reasons.
6. Given below is a flow chart showing ovarian changes during the menstrual cycle. Fill in the spaces giving the name of the hormones responsible for the events shown.



Summer Vacation Holiday Homework (2022-23)

Class XII Computer Science (083)

1.
 - a. Write the names of any four data types available in Python. (2)
 - b. Name the Python Library modules which need to be imported to invoke the following functions : 1
 - i. sqrt()
 - ii. start()
 - c. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code. 2 250 = Number WHILE Number<=1000: if Number=>750: print Number Number=Number+100 else print Number*2 Number=Number+50
 - d. Find and write the output of the following python code: (2) Msg1="WeLcOME"
Msg2="GUeSTs"
Msg3=" "
for I in range(0, len(Msg2)+1):
if Msg1[I]>="A" and Msg1[I]<="M":
Msg3=Msg3+Msg1[I]
elif Msg1[I]>="N" and Msg1[I]<="Z":

```
Msg3=Msg3+Msg2[I]
```

```
else:
```

```
Msg3=Msg3+"*"
```

```
print Msg3
```

- e. Find and write the output of the following python code: (3)

```
def Changer(P,Q=10):
```

```
P=P/Q
```

```
Q=P%Q
```

```
print P,"#",Q
```

```
return P
```

```
A=200
```

```
B=20
```

```
A=Changer(A, B)
```

```
print A,"",BB=Changer(B)printA,"",B
```

```
A=Changer(A)
```

```
print A,"$",B
```

- f. What possible output(s) are expected to be displayed on screen at the time of execution of the program from the following code ? Also specify the minimum values that can be assigned to each of the variables BEGIN and LAST. (2)

```
import random
```

```
VALUES=[10,20,30,40,50,60,70,80] BEGIN=random.randint(1,3)
```

```
LAST=random.randint(BEGIN,4)
```

```
for I in range(BEGIN,LAST+1):print VALUES[I],"-",
```

(i) 30 - 40 - 50 -	(ii) 10 - 20 - 30 - 40 -
(iii) 30 - 40 - 50 - 60 -	(iv) 30 - 40 - 50 - 60 - 70 -

2.

- a. Write four features of object oriented programming. (2)

b.

i. class Box: #Line 1

ii. L = 10 #Line 2

iii. Type="HARD" #Line 3

iv. def __init__(self,T,TL=30): #Line 4

v. self.Type = T #Line 5

vi. self.L = TL #Line 6

vii. def Disp(self): #Line 7

viii. print self.Type,Box.Type #Line 8

ix. print self.L,Box.L #Line 9

x. B1=Box("SOFT",20) #Line 10

xi. B1.Disp() #Line 11

xii. Box.Type="FLEXI" #Line 12

xiii. B2=Box("HARD") #Line 13

xiv. B2.Disp() #Line 14

Write the output of the above Python code. 2

OR

- i. class Target: #Line 1
- ii. def __init__(self): #Line 2
- iii. self.X = 20 #Line 3
- iv. self.Y = 24 #Line 4
- v. def Disp(self): #Line 5
- vi. print self.X,self.Y #Line 6
- vii. def __del__(self): #Line 7
- viii. print "Target Moved" #Line 8
- ix. def One(): #Line 9
- x. T=Target() #Line
- xi. T.Disp() #Line 11
- xii. One() #Line 12

- a. What are the methods/functions mentioned in Line 2 and Line 7 specifically known as?
- b. Mention the line number of the statement, which will call and execute the method/function shown in Line 2. (2)

Summer Vacation Holiday Homework (2022-23)

Class XII Hindi Core

1. निम्नलिखित प्रश्नों में से किन्हीं चार के संक्षिप्त उत्तर लिखिए : (1 x 4 = 4)
 - i. लोकतंत्र का चौथा खंभा किसे कहा जाता है और क्यों ?
 - ii. फीचर किसे कहते हैं ?
 - iii. संपादन के दो सिद्धांत बताइए।
 - iv. लोकतंत्र में जनसंचार के दो कार्यों का उल्लेख कीजिए।
 - v. पत्रकारीय लेखन किसे कहते हैं ?
2. 'बदल रही है सरकारी विद्यालयों की छवि' विषय पर एक आलेख लिखिए। (3)

अथवा

हाल ही में पढ़ी गई किसी पाक-विधि की पुस्तक की समीक्षा लिखिए।

3. 'विद्यालय स्वच्छता अभियान' विषय पर एक फीचर तैयार कीजिए। (3)

अथवा

आपकी बस्ती के निकट लगने वाले साप्ताहिक बाजार को विषय बनाकर एक फीचर तैयार कीजिए।

Summer Vacation Holiday Homework (2022-23)

Class XII Mathematics (041)

1. The Cartesian product $A \times A$ has 9 elements among which are found $(-1, 0)$ and $(0, 1)$. Find the set A and the remaining elements of $A \times A$.
2. Express the function $f: A \rightarrow \mathbb{R}$, $f(x) = x^2 - 1$, where $A = \{-4, 0, 1, 4\}$ as a set of ordered pairs.
3. Let $A = \mathbb{R} \setminus \{3\}$ and $B = \mathbb{R} - \{1\}$. Consider the function $f: A \rightarrow B$ defined by $f(x) = (x-2)/(x-3)$. Is f one-one and onto? Justify your answer.
4. Show that the function $f: \mathbb{R} \rightarrow \mathbb{R}$ is given by $f(x) = x^3$ is injective.
5. Show that the relation R in the set $\{1, 2, 3\}$ given by $R = \{(1, 2), (2, 1)\}$ is symmetric but neither reflexive nor transitive.
6. Write the Principal Value of $\cos^{-1}(\frac{\sqrt{2}}{2})$.
7. Let A be the set of all students of a Boys' school. Show that the relation R in A given by:
 $R = \{(a, b): a \text{ is sister of } b\}$ is an empty relation and the relation R' given by :
 $R' = \{(a, b) : \text{the difference between heights of } a \text{ and } b \text{ is less than } 3 \text{ metres}\}$ is an universal relation.
8. Let R be the relation in the set Z of integers given by:
 $R = \{(a, b): 2 \text{ divides } a - b\}$.
Show that the relation R is transitive.
9. Let $A = \mathbb{N} \times \mathbb{N}$ be the set of all ordered pairs of natural numbers and R be the relation on the set A defined by $(a, b) R (c, d)$ iff $ad = bc$. Show that R is an equivalence relation.
10. Check whether the relation R in the set \mathbb{R} of real numbers, defined by :
 $R = \{(a, b): 1 + ab > 0\}$, is reflexive, symmetric or transitive.