KENDRIYA VIDYALAYA AFS BAGDOGRA

CLASS XI SCIENCE

SUB: CHEMISTRY

WINTER BREAK HHW- 2021

CHAPTER: STATES OF MATTER:GASES AND LIQUIDS

1.How is Kelvin scale of temperature related to the Celsius scale?

2. With the help of gas laws,deduce an expression for the ideal gas equation.What is the utility of this equation?

3.What are real gases?Discuss the deviations of real gases from ideal behaviour with respect to pressure and temperature.

4.A liquid state is intermediate to the gaseous and solid states.Explain.

5.Explain what do you know about the boiling point of a liquid.

CHAPTER: s-BLOCK ELEMENTS

1.Which is the strongest reducing agent among alkali metals?

2.Arrange the following in decreasing order of ionic character.

$CaCl_2$, $BeCl_2$, $BaCl_2$

3.Alkali metals have low ionisation energies.Explain.

4.In what ways lithium shows similarities to magnesium in its chemical behaviour?

5.Discuss the general characteristics and gradation in properties of alkaline earth metals.

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WINTER BREAK ASSIGNMENT 2021

CLASS : XI (A) SUBJECT : COMPUTER SCIENCE

1. Define list.

2. What is the output of the following code:

a) print type ([1,2])

b) a= [1, 2, 3, None, ( ), [ ]}

print len(a)

c) list1 = [12,32,65,26,80,10]

list1.sort()

print(list1)

d) list1 = [1,2,3,4,5,6,7,8,9,10]

list1[::-2]

list1[:3] + list1[3:]

e) list1 = [1,2,3,4,5]

list1[len(list1)-1]

3. For each of the expression below, specify its type and value. If it generates error, write error.

Assume that expressions are evaluated in order.

a) x= [1, 2, [3, 'abc', 4], "Hi"]

(i) x[0]

(ii) x[2]

(iii) x[-1]

(iv) x[0:1]

(v) 2 in x

(vi) x[0]=8

b) List A= [1, 4, 3, 0]

List B= ["x", "z", "t", "q"]

(i) List A.sort ( )

(ii) List A

(iii) List A.insert (0, 100)

(iv) List A.remove (3)

(v) List A.append (7)

(vi) List A+List B

(vii) List B.pop ( )

(viii) List A.extend ([4, 1, 6, 3])

4. Differentiate between append() and extend() functions of list.

5. Consider the following tuples, tuple1 and tuple2:

tuple1 = (23,1,45,67,45,9,55,45)

tuple2 = (100,200)

Find the output of the following statements:

i. print(tuple1.index(45))
ii. print(tuple1.count(45))
iii. print(tuple1 + tuple2)
iv. print(len(tuple2))
v. print(max(tuple1))
vi. print(min(tuple1))
vii. print(sum(tuple2))

6. TypeError occurs while statement 2 is running.

Give reason. How can it be corrected?

```
>>> tuple1 = (5)                    #statement 1
>>> len(tuple1)                     #statement 2
```

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HOLIDAY HOMEWORK – WINTER BREAK-2021 (22.12.2021 TO 02.01.2022)

CLASS – XI SCIENCE & COMMERCE

ATTEMPT ALL THE QUESTIONS:

SECTION – LITERATURE – (PROSE): THE BROWNING VERSION &

(POETRY) CHILDHOOD (HORNBILL)

Q.1 Short Answer Type Questions:

(a) "We get all the slackers!" – What did Mr. Frank mean?

(b) What did Taplow consider 'muck'? Why?

(c) Who gave Taplow extra work on the last day of the term and why?

(d) Why was Taplow bitter?

(e) Who is Mr. Crocker – Harris? How was he different from other masters?

(f) Who is Millie Crocker-Harris? How did Mr. Frank and Taplow react to the sudden arrival of Millie Crocker-Harris?

(g) What is the poet trying to convey when he says that childhood is hidden infant's face?

(h) What is the poet's feeling towards his childhood?

Q. 2 Long Answer Type Questions:

(i) Compare and contrast Mr. Frank and Mr. Crocker-Harris.

(j) Taplow does an imitation of Mr. Crocker-Harris.
Do you think respect for one's teacher is fast disappearing in this modern era?
Give reason in support of your answer.

(k) Write up an article in about 130 words about childhood and the process of growing up.

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KENDRIYA VIDYALAYA AFS BAGDOGRA

WINTER BREAK HOME WORK CLASS XI : MATHS

1. If $\sec\theta = \sqrt{2}\ and\ \frac{3\pi}{2} < \theta < 2\pi$, find the value of $\frac{1+tan\theta+cosec\theta}{1+cot\theta-cosec\theta}$
2. If $\tan\beta = \frac{nsin\alpha cos\alpha}{1-nsin^2\alpha}$, $show\ that\ \tan tan\ (\alpha - \beta) = (1 - n)tan\alpha$
3. If
   $atan\alpha + b\ tan\beta = (a + b)\tan tan\left(\frac{\alpha+\beta}{2}\right)$, $\alpha \neq \beta$, $prove\ that\ acos\beta = bcos\alpha$
4. If tan A – tan B = x and cot B – cot A = y, prove that cot (A - B) = $\frac{1}{x} + \frac{1}{y}$
5. If $\alpha\ and\ B\ are\ the\ solutions\ of\ the\ equation$
$atanx + bsecx = c,\ then\ show\ that\ \tan tan\ (\alpha + \beta) = \frac{2ac}{a^2-c^2}$
6. Prove that : $\frac{1}{\sin sin\ (x-a)\ \sin sin\ (x-b)} = \frac{\cot cot\ (x-a) - \cot cot\ (x-b)}{\sin sin\ (a-b)}$
7. Prove that : sin A sin(60°- A) sin(60°+ A) = $\frac{1}{4}\ sin3A$
8. Prove that :
   $\left(\frac{cosA+cosB}{sinA-sinB}\right)^n + \left(\frac{sinA+sinB}{cosA-cosB}\right)^n = \{2cot^n\left(\frac{A-B}{2}\right),\ if\ n\ is\ even\ 0,\ \ if\ n\ is\ odd$
9. Prove that $sec^2\theta + cosec^2\theta \geq 4$
10. If 3sinx + 5cosx = 5, then write the value of 5sinx – 3cosx.
11. If $tan(\pi cos\theta) = cot(\pi sin\theta)$, $prove\ that\ cos\left(\theta - \frac{\pi}{4}\right) = \pm\frac{1}{2\sqrt{2}}$
12. Prove that : $tan142\frac{1}{2}° = 2 + \sqrt{2} - \sqrt{3} - \sqrt{6}$
13. solution of : $\left(\sqrt{3}sin\theta + cos\theta\right) + \left(\sqrt{3}cos\theta - sin\theta\right) = 2$
14. Express in circular measure and in degrees the angle of a regular polygon of 40 sides.
15. A railroad curve is to be laid out on a circle. What radius should be used if the track is to change direction by 25° in a distance of 40 m.
16. If x and y are real, show that $sec^2\theta = \frac{4xy}{(x+y)^2}$ is possible only when x = y.
17. If $xcos\theta = ycos\left(\theta + \frac{2\pi}{3}\right) = zcos\left(\theta + \frac{4\pi}{3}\right)$, $find\ \frac{1}{x} + \frac{1}{y} + \frac{1}{z}$
18. If $0 < x < \pi\ and\ cosx + sinx = \frac{1}{2}$, $find\ the\ value\ of\ tanx$
19. If the angular diameter of the moon be 30', how far from the eye a coin of 2.2 cm diameter be kept to hide the moon?
20. Prove : tan50° = 2 tan10° + tan 40°

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WINTER BREAK HOME WORK 2021

SUBJECT PHYSICS **TERM II** **CLASS XI SCIENCE**

CHAPTER: MECHANICAL PROPERTIES OF SOLIDS

1. **ALL NCERT BOOK QUESTIONS INCLUDING PROBLEMS**

CHAPTER: MECHANICAL PROPERTIES OF FLUIDS

2. **ALL NCERT BOOK QUESTIONS INCLUDING PROBLEMS (UP TO THE SYLLABUS COMPLETED IN CLASS)**

INSTRUCTIONS:

WRITE THE ANSWERS ONLY WITH PROPER QUESTION NUMBERS IN YOUR CLASS-WORK COPY.

DATE OF SUBMISSION: 03/01/2022

केंद्रीय विद्यालय ए० एफ० एस०, बागडोगरा

शीतकालीन अवकाश गृह कार्य

हिंदी (XI)

निम्नलिखित प्रश्नों के उत्तर दीजिये :

(क) वर्षा यहाँ एक घटना है, एक सुखद संयोग है - लेखक ने ऐसा क्यों कहा है?

(ख) स्पीति में बारिश का वर्णन एक अलग तरीके से किया गया है। आप अपने यहाँ होने वाली बारिश का वर्णन कीजिये।

(ग) ऐसी पाँच रचनाओं का संकलन कीजिये जिसमे प्रकृति के उपादानों की कल्पना संदेशवाहक के रूप में की गई है।

(घ) घर से अलग होकर आप घर को किस तरह से याद करते हैं? लिखें।

"परियोजना कार्य"

दुष्यन्त कुमार का सामान्य जीवन परिचय दीजिये एवं हिंदी ग़ज़ल में उनके योगदानों का संक्षिप्त विवरण प्रस्तुत करें।

Class XI (A)

SUBJECT : BIOLOGY

TOPIC : TECHNOLOGY AND TOYS (JNNSMEE – 2022)

Prepare a project on any one of the following topics –

1. Health and Cleanliness
2. Environmental and climate changes

hint : As discussed in the class the project will be shown or exhibited during JNNSMEE – 2022 at vidyalaya level.