Roll No. :
Date :

Time -
MM - 40

1. Why common salt is added to precipitate out soap from the solution during its manufacture? 1

2. Define Lewis acids and bases with example. 1

3. What is the effect of increasing pressure on the equilibrium? 1
$N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$

4. Write the expression for the equilibrium constant (K_c) for the reaction: 1
$CH_3COOC_2H_5(aq) + H_2O(l) \rightleftharpoons$
$CH_3COOH(aq) + C_2H_5OH(aq)$

5. What is the effect of temperature on solubility of gases in liquids? 1

6. What is the effect of temperature on the reactions? 1
(*i*) $N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g) + \text{Heat}$
(*ii*) $N_2(g) + O_2(g) \rightleftharpoons 2NO(g) - \text{Heat}$

7. What is meant by reaction quotient? 1

8. If $Q_c < K_c$, in which direction reaction will proceed? 1

9. If $Q_c > K_c$, predict the direction of reaction. 1

10. $A \rightleftharpoons B \quad K_1 = 1$ 1
$B \rightleftharpoons C \quad K_2 = 2$
$C \rightleftharpoons D \quad K_3 = 3$
$D \rightleftharpoons E \quad K_4 = 4$
What is value of K for $A \rightleftharpoons E$?

11. $N_2 + 3H_2 \rightleftharpoons 2NH_3 + \text{Heat}$ 1
What is the effect of increasing temperature on value of K?

12. Give the relationship between K_a, *c* and α, where 'K_a' is acid dissociation constant, '*c*' is molar concentration, 'α' is degree of dissociation. 1

13. If $K_w = 49 \times 10^{-14}$, what will be neutral pH of H_2O? 1

14. pK_a values of acids A, B, C, D are 1.5, 3.5, 2.0 and 5.0. Which of them is strongest acid? 1

15. Write the conjugate acids for Bronsted bases NH_2^-, NH_3 and $HCOO^-$. 1

16. All Bronsted acids are not Lewis acids. Explain. 1

17. What is the oxidation number of S in $Na_2S_4O_6$ and Na_2SO_3? 1

18. Write the oxidation and reduction reactions separately from the following redox reaction: 1

$$2Fe + 2H_2O + O_2 \longrightarrow 2Fe(OH)_2$$

19. Calculate the oxidation number of underlined elements in the following: $Na_2B_4O_7$, OsO_4 1

20. What is K_c for the following equilibrium when the equilibrium concentration of each substance is: 2
$[SO_2] = 0.60$ M, $[O_2] = 0.82$ M and $[SO_3] = 1.90$ M?

$$2SO_2(g) + O_2(g) \rightleftharpoons 2SO_3(g)$$

21. For the following equilibrium, 2
$K_c = 6.3 \times 10^{14}$ at 1000 K

$$NO(g) + O_3(g) \rightleftharpoons NO_2(g) + O_2(g)$$

Both the forward and reverse reactions in the equilibrium are elementary bimolecular reactions. What is K_c, for the reverse reaction?

KV AFS BAGDOGRA

WINTER BREAK HOLIDAY HOMEWORK

SUBJECT: PHYSICS

CLASS XI:

1. Revision of NCERT Questions of Chapter 8 to 11
2. Solution of NCERT EXEMPLER questions for the above mentioned chapters

केंद्रीय विद्यालय बागडोगरा
शीतकालीन अवकाश गृहकार्य 2023-24
विषय - हिंदी
कक्षा - ग्यारहवीं

1. आलो आधरिं पाठ से **20** बहुविकल्पीय प्रश्न का निर्माण कीजिए तथा पाठ में दिए गए प्रश्न उत्तरों को उत्तर पुस्तिका में लिखिए।

2. **किसी मेले का आँखों देखा वर्णन करें। (शब्द-सीमा 150 शब्द)**

3. **'गणतंत्र दिवस' पर रिपोर्ट (प्रतिवेदन) लिखें ।**

4. ज़िला दार्जिलिंग के दर्शनीय-स्थलों की जानकारी देते हुए दिल्ली में बसे अपने मित्र को पत्र लिखिए ।

5. निम्नलिखित में से कोई दो फ़िल्में देखिए और उनसे मिलने वाली पाँच प्रमुख शिक्षाएँ लिखिए :-

i :- https://youtu.be/gZy4vlGf7MY
I am kalam

ii :- https://youtu.be/CPXkijYl9Y0
Chalk n duster

iii :- https://youtu.be/a1G1Sg3-g2g
Taare zameen par

iv :- https://youtu.be/l3Sqdk88gH4
Baghban

v :- **https://youtu.be/epKzi21TRN8**
उम्मीद (लघु फ़िल्म)

vi :- **https://youtu.be/OnhZDZXzBz4**
रद्दी लाइब्रेरी (लघु फ़िल्म)

6. जनसंचार के अन्तर्गत पत्रकारिता के प्रकार, पत्रकारिता का इतिहास एवं पत्रकारों के प्रकार का वर्णन करें।

7. राजस्थान की रजत बूंदे पाठ के प्रश्न उत्तर को कॉपी में लिखें।

8. भारतीय गायिकाओं में बेजोड़ लता मंगेशकर पाठ के प्रश्न उत्तर को कॉपी में लिखें।

9. शिक्षा विभाग में रोजगार हेतु स्व वृत के साथ आवेदन पत्र लिखिए।

विषयाध्यापक :– डॉ. मुरलीधर

स्नातकोत्तर शिक्षक हिंदी

PM SHRI KV AFS BAGDOGRA

WINTER BREAK HOME WORK MATHS

CLASS XI : 2023-24

Complete the following activities in the Activity Note Book :

1. To construct different types of conic sections. (Activity No. 21)
2. To explain the concept of octants by three mutually perpendicular planes in space. (Activity No. 27)
3. To find analytically $f(x) = \frac{x^2 - c^2}{x - c}$. (Activity No. 28)
4. Verification of the geometrical significance of derivative. (Activity No. 29)

Class 11th

winter break homework

Economics

1. Complete the numericals of production function.

2. Complete the numericals of cost function.