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## CHEMISTRY

# BOOKS - FULL MARKS CHEMISTRY (TAMIL ENGLISH) 

## SAMPLE PAPER -18 (UNSOLVED)

## Part I

1. Which one of the following is the standard for atomic mass?
A. ${ }_{1} H^{1}$
B. ${ }_{6} C^{12}$
C. ${ }_{6} C^{14}$
D. ${ }_{8} C^{14}$

Answer: A
2. What is the maximum numbers of electrons that can be associated with the following set of quantum numbers ?
A. 4
B. 6
C. 2
D. 10

## Answer:

3. Which of the following have the highest value of electronegativity?
A. Halogens
B. Alkali metals
C. Alkaline earth metals
D. Transition metals

## Answer:

## - View Text Solution

4. The hybridisation of oxygen atom is $\mathrm{H}, \mathrm{O}$ and $\mathrm{H}, \mathrm{O}$, are respectively.........
A. sp and $s p^{3}$
B. $s p$ and sp
C. sp and sp .
D. $s p^{3}$ and $s p^{3}$

## Answer:

5. Gases deviate from ideal behavior at high pressure. Which of the following statement(s) is correct for non-ideality?
A. at high pressure the collision between the gas molecule become enormous
B. at high pressure the gas molecules move only in one direction
C. at high pressure, the volume of gas become insignificant
D. at high pressure the intermolecular interactions become significant

## Answer:

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6. 

Given
that
$C_{(g)}+O_{2(g)} \rightarrow C_{2(g)} \Delta H^{\circ}=-1 K J, 2 \mathrm{CO}_{(g)}+O_{2(g)} \rightarrow 2 \mathrm{CO}_{2(g)}$ calculate the $\Delta H^{\circ}$ for the reaction $C_{(g)}+1 / 2 O_{2(g)} \rightarrow \mathrm{CO}_{(g)}$
A. $\frac{b+2 a}{2}$
B. $2 a-b$
C. $\frac{2 a-b}{2}$
D. $\frac{b-2 a}{2}$

## Answer:

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7. The expression of $K_{p}$ for the reversible reaction $2 \mathrm{CO}(g) \Leftrightarrow \mathrm{CO}_{2}(g)+C(s)$
A. $K_{p}=\frac{p^{2} C O}{p C O_{2} . \mathrm{Pc}}$
B. $K_{p}=\frac{P C O_{2}}{P^{2} C O}$
C. $K_{P}=\frac{p C O_{3}}{P C O}$
D. $K_{P}=\frac{P^{2} \mathrm{Co}}{\mathrm{Pco}_{2}}$

## Answer:

8. 0.5 mole of ethanol is mixed with 1.5 mole of water. Then the mole fraction of ethanol and water are ....
A. $0.75,0.25$
B. $0.25,0.75$
C. $0.5,0.5$
D. $0.90,0.10$

## Answer:

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9. $X e F_{2}$ is isostructural with
A. $\mathrm{SbCl}_{2}$
B. $\mathrm{BaCl}_{2}$
C. $\mathrm{TeF}_{2}$
D. $\mathrm{ICI}_{2}^{-}$

## Answer:

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10. Copper oxide test is used to detect ....
A. Carbon \& Hydrogen
B. Oxygen \& Nitrogens
C. Nitrogen \& Sulphur
D. Phosphorous \& Chlorine

## Answer:

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11. Homolytic fission of covalent bond leads to the formation of ....
A. electrophile
B. nucleophile
C. Carbocation
D. free radical

## Answer:

## - View Text Solution

12. In the following reactions the major product obtained is .....
A.
B.
C.
D.

## Answer:

13. Conversion of benzene to chlorobenzene in the presence of $C u C l_{2} / H C l i s$ named as $\qquad$
A. Fittig reaction
B. Raschig process
C. Dow's process
D. Gattermann reaction

## Answer:

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14. Assertion (A): UV radiations damages the fish productivity.

Reason (R): UV radiations affect the growth of phytoplanktons as a result food chain in ocean is disturbed.
A. Both $(A)$ and (R) are correct but (R) is not the correct explanation of (A).
B. Both (A) and (R) are correct and (R) is the correct explanation of (A).
C. (A) is correct but (R) is wrong.
D. (A) is wrong but ( R ) is correct.

## Answer:

## - View Text Solution

## Part li

1. Define - Element and atom.
2. Energy of an electron in hydrogen atom in ground state is -13.6 eV . What is the energy of the electron in the third excited state?

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3. What is compression factor?

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4. What are the scope of thermodynamics?

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5. for even reaction at a particular temperature, the equilibrium constant has constant value. Is the value of $Q$ also constant? Explain.
6. What are all the advantages of Kjeldahl's method?

## D View Text Solution

7. Arrange the relative stability of following carbocation, (Increasing order)
(a) $\stackrel{+}{C} \mathrm{H}_{3}$
(b) $\mathrm{CH}_{3}-\stackrel{+}{\mathrm{C}} \mathrm{H}_{2}$
(c) $\left(\mathrm{CH}_{2}\right)_{3}{ }^{+}$

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8. What is Sabatier - Sendersens reaction?

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9. Starting from $\mathrm{CH}_{3} \mathrm{Mgl}$, how will you prepare the following?
(a) Acetic acid (B) Acetone
