



CHEMISTRY

BOOKS - NTA MOCK TESTS

NEET MOCK TEST 5

Chemistry Single Choice

1. Which of the following is not a chlorinated insecticide?

- A. DDT
- B. Methoxychlor
- C. Parathion
- D. BHC

Answer: C



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2. A compound which is strong oxidizing agent and has orange coloured crystal. It is used in the preparation of azo compounds.

Identify the compound.

- A. Hydrogen peroxide
- B. potassium permanganate
- C. sodium chromate
- D. potassium dichromate

Answer: D



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3. Two moles of helium gas expanded isothermally and irreversibly at $27^{\circ}C$ from volume $1dm^3$ to $1m^3$ at constant pressure of 100 k Pa.

Calculate the work done.

A. 99900 J

B. $-99900J$

C. $34464.65J$

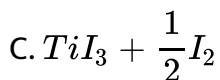
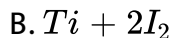
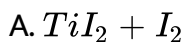
D. $-34464.65J$

Answer: B



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4. TiI_4 heating gives



D. None of these

Answer: B

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5. How many tetrahedral holes are occupied in diamond ?

A. 0.25

B. 0.5

C. 0.75

D. 1

Answer: B

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6. In the synthesis of ammonia by Harber's process. If 60 moles of ammonia is obtained in one hour, then the rate of disappearance of

nitrogen is:

A. 30 mol/min

B. 6 mol/min

C. 0.5 mol/min

D. 60 mol/min

Answer: C

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7. The solubility product of $AgCrO_4$ is 32×10^{-12} . What is the concentration of CrO_4^{2-} ions in that solution ?

A. $2 \times 10^{-4} M$

B. $16 \times 10^{-4} M$

C. $8 \times 10^{-4} M$

D. $8 \times 10^{-8} M$

Answer: A



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8. What is the lowest energy of the spectral line emitted by the hydrogen atom in the Lyman series?

(h = Planck's constant, c = velocity of light, R = Rydberg's constant).

A. $\frac{5hcR}{36}$

B. $\frac{4hcR}{3}$

C. $\frac{3hcR}{4}$

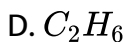
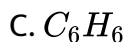
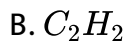
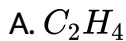
D. $\frac{7hcR}{144}$

Answer: C



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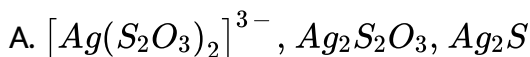
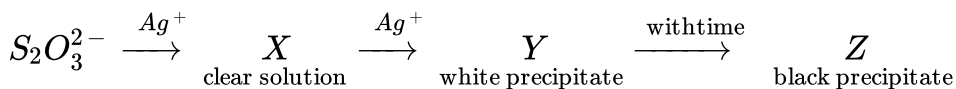
9. When Ethylchloride and alcoholic KOH are heated, the compound obtained is

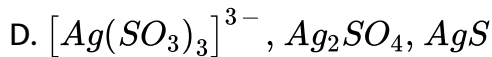
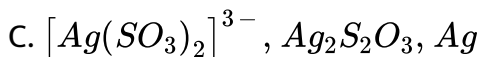
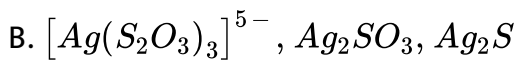


Answer: A

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10. In the following reaction sequence in aqueous solution, the species X, Y and Z, respectively





Answer: A

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11. Phenol is

A. A base weaker than ammonia

B. An acid stronger than carbonic acid

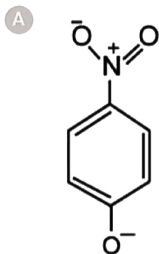
C. An acid weaker than carbonic acid

D. A neutral compound

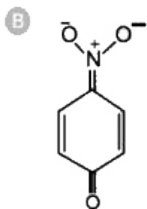
Answer: C

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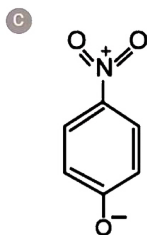
12. The most unlikely resonating structures of p-nitrophenoxide ion is :



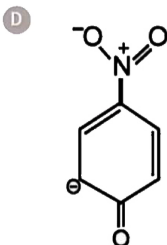
A.



B.



C.



D.

Answer: C

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13. A mixture of methane and ethane in the molar ratio of $x:y$ has a mean molar mass of 20. what would be the mean molar mass, if the gases are mixed in the molar ratio of $y:x$?

A. 20 u

B. 25 u

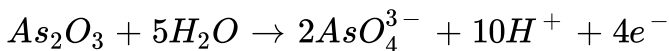
C. 24 u

D. 15 u

Answer: C

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14. Evaluate equivalent weight of As_2O_3 :



A. $E_{As_2O_3} = \frac{M_{As_2O_3}}{3}$

B. $E_{As_2O_3} = \frac{M_{As_2O_3}}{4}$

C. $E_{As_2O_3} = \frac{M_{As_2O_3}}{5}$

D. $E_{As_2O_3} = \frac{M_{As_2O_3}}{2}$

Answer: B

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15. What will be the Freundlich's adsorption isotherm equation at high pressure?

A. $\frac{x}{m} = k$

B. $\frac{x}{m} = kp$

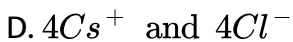
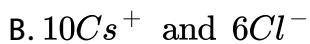
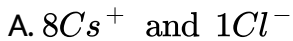
C. None of these

D. $\frac{x}{m} = \frac{k}{p}$

Answer: A

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16. The mass of a unit cell of CsCl corresponds to the combined masses of :



Answer: C

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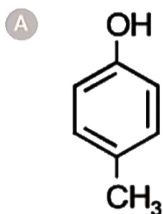
17. The dielectric constant of H_2O is 80. The electrostatic force of attraction between Na^+ and Cl^- will be

- A. Reduced to $\frac{1}{80}$ in water than in air
- B. Reduced to $\frac{1}{40}$ in water than in air
- C. will remain unchanged
- D. will be increased to 80 in water than in air

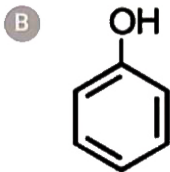
Answer: A

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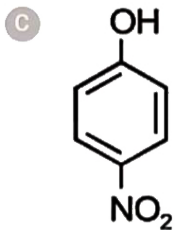
18. Which one is the most acidic compound?



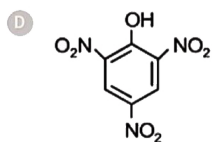
A.



B.



C.



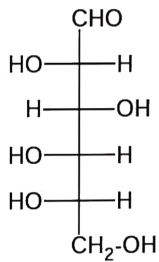
D.

Answer: D

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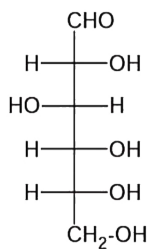
19. What is the structure of L-glucose ?

A



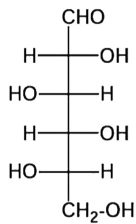
A.

B



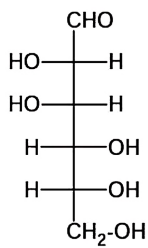
B.

C



C.

D



D.

Answer: A


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20. A sample of air contains only N_2 , O_2 and H_2O . It is saturated with water vapours and the total pressure is 640 torr. The vapours of water is 40 torr and the molar ratio of $N_2 : O_2$ is 3 : 1. The partial pressure of N_2 in the sample is

- A. 480 torr
- B. 600 torr
- C. 525 torr
- D. 450 torr

Answer: D



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21. Which one is classified as a condensation polymer ?

- A. Dacron

B. Neoprene

C. Teflon

D. Acrylonitrile

Answer: D

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22. the tenth elements in the periodic table resembles with the

A. First element

B. second element

C. Fourth element

D. Ninth element

Answer: B

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23. Consider the following statements regarding compounds which cause global warming X is a hydrocarbon, A and B are neutral oxides of nitrogen, C is a blue coloured gas and D is released when H_2S is reacted with oxygen. Identify the correct statements about X, A, B, C and D.

- (I) X is mainly present in natural gas
- (II) In A and B one is diamagnetic and another one is paramagnetic
- (III) C can be identified by using liquid element in d-block
- (IV) D causes acid rain

A. All are correct

B. I, II, III

C. II, III, IV

D. I, II, IV

Answer: D

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24. An acid solution of 0.005 M has a pH of 5. The degree of ionisation of acid is

A. 0.1×10^{-2}

B. 0.2×10^{-2}

C. 0.5×10^{-2}

D. 0.6×10^{-2}

Answer: B

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25. CH_3COCH_3 and CH_3CH_2CHO can be distinguished by :

A. Neutral $FeCl_3$

B. Tollen's reagent

C. NaHSO_3

D. 2, 4 – DNP

Answer: B

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26. Acetic anhydride is prepared in the laboratory by heating sodium acetate with

- A. Ethyl chloride
- B. Acetyl chloride
- C. conc. H_2SO_4
- D. Zinc dust

Answer: B

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27. An unknown alcohol is treated with the "Lucas reagent" to determine whether the alcohol is primary, secondary or tertiary. Which alcohol reacts fastest and by what mechanism?

A. Secondary alcohol by S_N2

B. Tertiary alcohol by S_N2

C. Secondary alcohol by S_N1

D. Tertiary alcohol by S_N1

Answer: D

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28. 30 mL of $0.2N BaCl_2$ is mixed with 40 mL of $0.3N Al_2(SO_4)_3$. How many g of $BaSO_4$ are formed?

A. 0.10 g

B. 0.60 g

C. 0.90 g

D. 0.70 g

Answer: D

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29. 1 mol each of $AgNO_3$, $CuSO_4$ and $AlCl_3$ is electrolyzed. The number of faradays required is in the ration of:

A. 1:1:1

B. 1:2:3

C. 3:2:1

D. 1:3:1

Answer: B



30. At a constant temperature, which of the following aqueous solutions will have the maximum vapour pressure?

(Mol wt $NaCl = 58.5$, $H_2SO_4 = 98.0 \text{ gmol}^{-1}$)

- A. 1 molal $NaCl$ (aq)
- B. 1 molar $NaCl$ (aq)
- C. 1 molal H_2SO_4 (aq)
- D. 1 molar H_2SO_4 (aq)

Answer: A

31. When two reactants A and B are mixed to give products, C and D , the reaction quotient (Q) at the initial stages of the reaction

A. Is independent of time

B. Increases with time

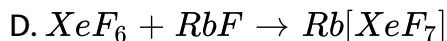
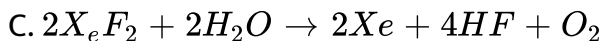
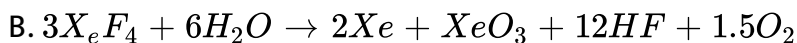
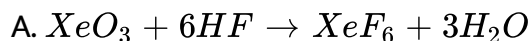
C. Decreases with time

D. Is zero

Answer: B

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32. Which one of the following reaction of xenon compounds is not Feasible?



Answer: A

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33. Consider the reaction

$A \rightarrow 2B + C$, $\Delta H = -15\text{kcal}$. The energy of activation of backward reaction is 20kcalmol^{-1} . In presence of catalyst, the energy of activation of forward reaction is 3kcalmol^{-1} . At 400 K the catalyst causes the rate of the forward reaction to increase by the number of times equal to -

A. $e^{3.5}$

B. $e^{2.5}$

C. $e^{-2.5}$

D. $e^{-2.303}$

Answer: B

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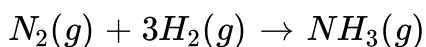
34. The enthalpy and entropy change for the reaction: $Br_2(l) + Cl_2(g) \rightarrow 2BrCl(g)$ are 30kJmol^{-1} and $105\text{JK}^{-1}\text{mol}^{-1}$ respectively. The temperature at which the reaction will be in equilibrium is:-

- A. 300 K
- B. 285.7 K
- C. 273 K
- D. 450 K

Answer: B

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35. For the reversible reaction



at 500°C the value of K_p is 1.44×10^{-5} when partial pressure is measured in atmosphere. The corresponding value of K_c with concentration in mol/L is

A. $\frac{1.44 \times 10^{-7}}{(0.082 \times 773)^{-2}}$

B. $\frac{1.44 \times 10^{-5}}{(0.082 \times 773)^{-2}}$

C. $\frac{1.44 \times 10^{-5}}{(8.314 \times 500)^{-2}}$

D. $\frac{1.44 \times 10^{-5}}{(0.082 \times 500)^{-2}}$

Answer: B

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36. The most satisfactory method to separate mixture of sugars is :

A. Fractional crystallisation

B. Sublimation

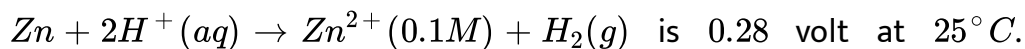
C. Chromatography

D. Benedict's reagent

Answer: C

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37. The emf of a cell corresponding to the reaction



Calculate the pH of the solution at the hydrogen electrode.

$$E_{\text{Zn}^{2+}/\text{Zn}}^\circ = -0.76 \text{ volt and } E_{\text{H}^+/\text{H}_2}^\circ = 0$$

A. 2.30

B. 7.8

C. 9.2

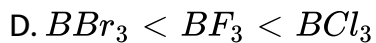
D. 8.30

Answer: D

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38. Arrange the following in correct order of Lewis acidity

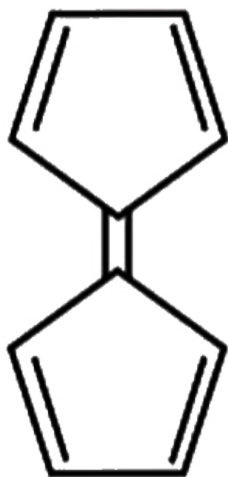
BF_3 , BCl_3 , BBr_3 .



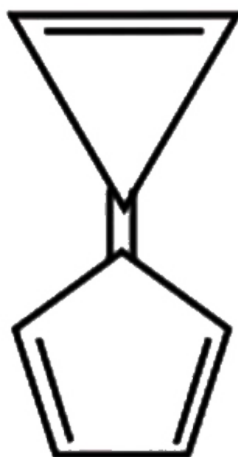
Answer: C

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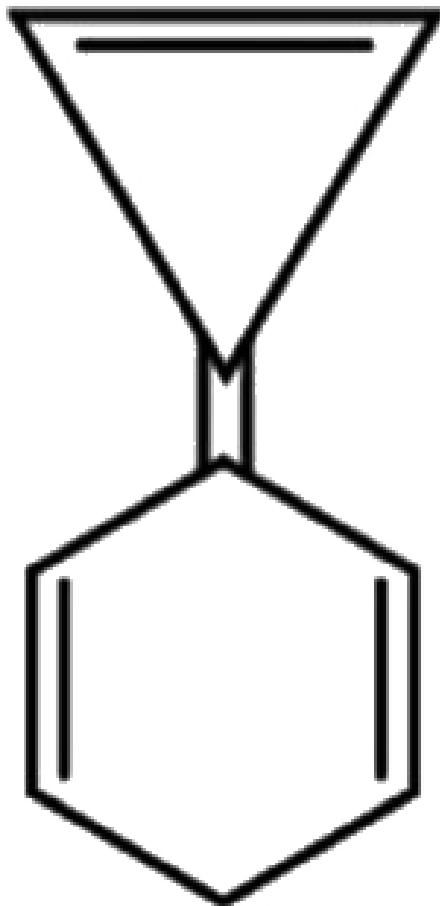
39. Consider the following structures.



(I)



(II)



(III)

Choose the correct statement regarding the above structures.

A. Dipole moment varies as II gt III gt I

B. II is more stable than I

C. I is the most reactive among three

D. All of the above

Answer: D

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40. The number of geometric isomers that can exist for square planar

$\left[Pt(Cl)(py)(NH_3)(NH_2OH)^+ \right]$ is (py = pyridine).

A. 6

B. 2

C. 3

D. 4

Answer: C





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41. A solution of acetone in ethanol

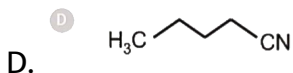
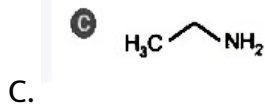
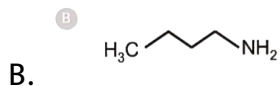
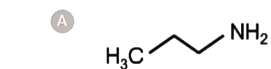
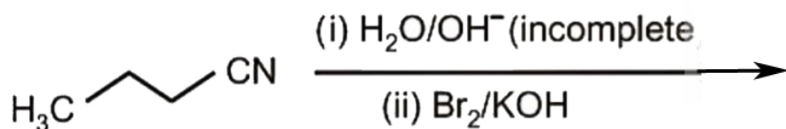
- A. Obeys Raoult's law
- B. Shows a negative deviation from Raoult's law
- C. Shows a positive deviation from Raoult's law
- D. Behaves like a near ideal solution

Answer: C



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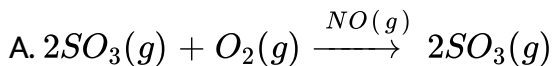
42. Complete the following reaction



Answer: A

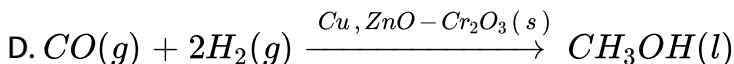
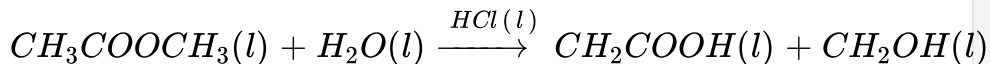
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43. Which of the following is an example of heterogeneous catalysis reaction?



B. Hydrolysis of aqueous sucrose solution in the presence of aqueous mineral acid

C.



Answer: D



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44. A mixture of dihydrogen and dioxygen at one bar pressure contains 20% by weight of dihydrogen. Calculate the partial pressure of dihydrogen.

A. 0.8 bar

B. 0.4 bar

C. 1.6 bar

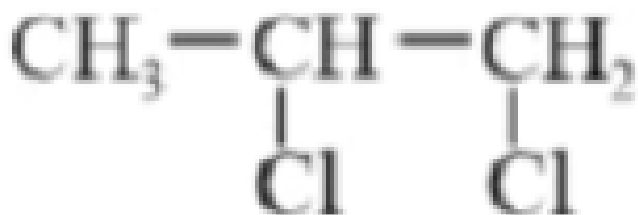
D. 3.2 bar

Answer: A

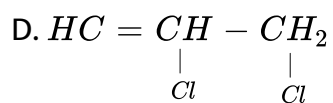
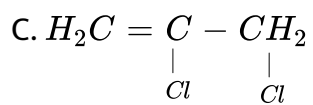
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45. $CH_2 = CH - CH_3 \xrightarrow{Cl_2, 500^\circ C}$ A. The product A is

A.



B.



Answer: B

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