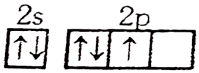
CHEMISTRY

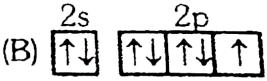
BOOKS - NTA MOCK TESTS

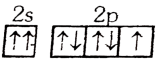
NTA NEET SET 89

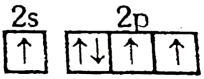
Chemistry

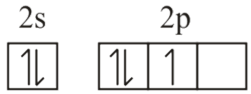
1. Which of the following violates the Aufbau principal?

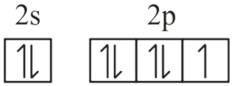
(A) 

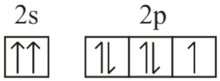
(B) 

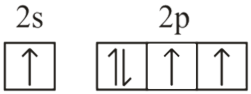
(C) 

(D) 

A. 

B. 

C. 

D. 

Answer: D

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2. Which of the following has shortest carbon-carbon bond length ?

A. C_6H_6

B. C_2H_4

C. C_2H_2

D. C_2H_6

Answer: C

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3. In the reaction sequence $CH_3 - CH_2 - CH_2 - Br \xrightarrow{AgCN} (X) \xrightarrow{H_2\emptyset\, H^+} (Y)$ (Y) will be

A. $CH_3 - CH_2 - CH_2 - NH_2$

B. $CH_3 - CH_2 - NH_2$

C. $CH_3(CH_2)_2 - CH_2 - NH_2$

D. $CH_3 - (CH_2)_3 - CH_2 - NH_2$

Answer: A

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4. The oxidising state of molybdenum in its oxo complex species $\left[Mo_2O_4(C_2H_4)_2(H_2O)\right]^{2-}$ is

A. 1

B. 3

C. 4

D. 2

Answer: B

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5. When a standard solution of NaOH is left in air for a few hours:

A. a precipitate will form

B. strength of solution will decrease

C. the strength of solution will increase

D. the concentration of Na^+ ion in solution will remains same

Answer: B

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6. Out of these the correct match is

A. Bayer's method $-Na_2CO_3$

B. Matte - 98% $Cu_2S + 2\,\%\, FeS$

C. van Arkel method - Agl

D. Thoms slag - Raw material for cement industry

Answer: B

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7. A bottle of cold drink has 200 mL liquid in which CO_2 is 0.1 molar. If CO_2 behaves as ideal gas the volume of CO_2 at S.T.P. solution of cold drink is

A. 0.224 litre

B. 0.448 litre

C. 22.4 litre

D. 2.24 litre

Answer: B

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8. Which among the following reagents convert alkyl halide into alkane ?

A. Bu_3SnH

B. Na/dry ether

C. R_2CuLi

D. All of these

Answer: D

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9. Which of the following is correct statement ?

A. F_2 has higher dissociation energy than Cl_2

B. F has higher electron affinity than Cl

C. HF is stronger acid than HCl

D. Boiling point increases down the group in halogens

Answer: D

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10. Equivalent mass of $KMnO_4$ in acidic basic and netural are in the ratio, of:

A. $3:5:15$

B. $5:3:1$

C. $5:1:3$

D. $3:15:5$

Answer: D

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11. AgCl on fusion with sodium carbonate, gives :

A. Ag_2CO_3

B. Ag_2O

C. Ag

D. Ag_2C_2

Answer: C

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12. In the given reaction $C_6H_5CH_2COOH \xrightarrow[(ii)\,P_2O_5]{(i)\,NH_3/\,\Delta} (X)$

(X) will be

A. $C_6H_5 - CH_2COONH_4$

B. $C_6H_5 - CH_2CONH_2$

C. $C_6H_5 - CH_2 - CN$

D. C_6H_5CN

Answer: C

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13. Which of the following compound does not give oxyacid of central atom on hydrolysis?

A. BF_3

B. NCl_3

C. SF_4

D. PCl_5

Answer: B

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14. The equilibrium constant for the ionization of RNH_2 (g) in water as

$RNH_2(g) + H_2O(l) \Leftrightarrow RNH_3^+(aq) + OH^-(aq)$

is $8 \times 10^{-6} at 25^\circ C$. find the pH of a solution at equilibrium when pressure of RNH_2(g) is 0.5 bar :

A. 2.7

B. 4.7

C. 3.7

D. 5.7

Answer: A

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15. Consider the following reaction and select incorrect statement about gas (P):

$$Zn + HNO_3(\text{Dilute}) \rightarrow Zn(NO_3)_2 + P \uparrow$$

A. Gives neutral solution in water

B. Contains more O_2 than air

C. Forms brown ring with $FeSO_4$ solution

D. None of these

Answer: C

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16. Conversion of isobutene into isobutyl alcohol can be possible with

A. $HOH / H^{\oplus}$

B. BH_3 followed by $H_2O_2 / \overline{O}H$

C. Conc. H_2SO_4 followed by HOH

D. All of these

Answer: B

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17. The incorrect statement regarding 'X' in given reaction is:

$$BF_3 + LiAlH_4 \rightarrow \overset{\text{Ether}}{\longrightarrow} (X) + LiF + AlF_3$$

A. Twelve electrons are involved in bonding

B. Four, two centre- two electron bonds

C. Two, three centre - two electron bonds

D. X does not react with NH_3

Answer: D

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18. In the reaction $CH_3 - C \equiv C - H \xrightarrow{(i)\, NaNH_2 / NH_3 (l)} (A) \xrightarrow{CH_3 - CH_2 - CH_2 - Br} (B)$ The product B is

A. $CH_3 - C \equiv C - CH_2 - CH_2 - CH_3$

B. $CH_3 - CH = CH_2$

C. $CH_3 - CH_2 - C \equiv C - CH_2 - CH_3$

D. $CH_3 - CH = C = CH - CH_2 - CH_3$

Answer: A

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19. One molee of methanol when burnt in O_2, gives out 723 kJ mol^{-1} of heat. If one mole of O_2 is used, what will be the amount of heat evovled?

A. 723 J

B. 482 kJ

C. 964 kJ

D. 289.2 kJ

Answer: B

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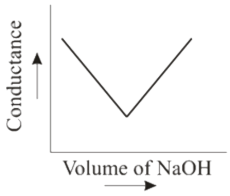
20. When HCl (aq) is titrated with NaOH(aq) conductometrically then the graphical representation of the titration will be

A.



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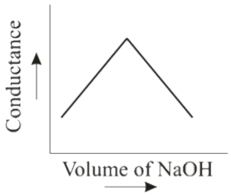

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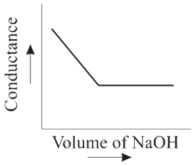
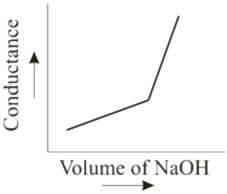


D.



Answer: A

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21. Which of the following effects are possible in ortho nitrophenol

A. $-l$ effect

B. $-R$ (mesoeric) effect

C. Intermolecular H - bonding

D. All of these

Answer: D

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22. Angular momentum is

A. wave number

B. energy

C. Plank constant

D. linear momentum

Answer: C

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23. The stability of particular oxidation state of a metal in aqueous solution is determined by

A. Enthalpy of sublimation of the metal

B. Ionization energy

C. Enthalpy of hydration of the metal ion

D. All of these

Answer: D

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24. Insulin is dissolved in suitable solvent and the osmotic pressure (π) of solution of various concentration $\left(g/cm^3\right)$ C is measured at $27^\circ C$. The slope of plot of π against C is found to be 4.1×10^{-3}. The molecular mass of inulin is:

A. 3×10^3

B. 6×10^6

C. 3×10^6

D. 6×10^3

Answer: B

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25. Two isomeric Ketones, 3-pentanone and 2-pentanone can be distinguished by:

A. $I_2 / NaOH$ only

B. $NaSO_3H$ only

C. NaCN/HCl

D. Both A and B

Answer: D

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26. $Ph - CHO + Ph - CHO \xrightarrow{Na_2[Fe(CO)_4]} Ph - \overset{O}{\overset{\|}{C}} - OCH_2 - Ph$.

This reaction is known as :

A. Claisen reaction

B. Tischenko reaction

C. Perkin reaction

D. Cannizzaro reaction

Answer: B

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27. Depletion of ozone layer causes

A. Oxides of nitrogen

B. Oxides of carbon

C. Oxides of sulphur

D. None of the above

Answer: A

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28. Among the carbonates of alkali metals which one has highest thermal stability ?

A. Cs_2CO_3

B. Rb_2CO_3

C. K_2CO_3

D. Na_2CO_3

Answer: A

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29. The efficiency of a hypothetical cell is about $84\,\%$ which involves the following reactions:

$A(s) + B^{2+}(aq) \rightarrow A^{2+}(aq)_B(s)\ \Delta H = -285kJ$

Then, the standard electrode potential of the cell will be: (Asume `DeltaS = 0)

A. 1.20V

B. 2.40 V

C. 1.10 V

D. 1.24 V

Answer: D

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30. An acid solution of $pH = 6$ is diluted 1000 times, the pH of the final solution is

A. 6.95

B. 4

C. 6

D. 9

Answer: A

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31. The number of aromatic structures possible for the molecular formula C_7H_8O is

A. 2

B. 3

C. 4

D. 5

Answer: D

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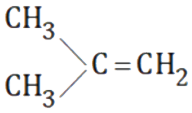
32. Which of the following alkenes is the most stable ?

A. $CH_2 = CH_2$

B. $CH_3 - CH = CH_2$

C. $CH_3 - CH = CH - CH3$

D. 

Answer: D

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33. During micelle formation :

A. $\Delta H = +ve, \Delta S = +ve$

B. $\Delta H = -ve, \Delta S = -ve$

C. $\Delta H = -ve, \Delta S = +ve$

D. $\Delta H = +ve, \Delta S = -ve$

Answer: D

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34. The graph between log $t_{1/2}$ and log a at a given temperature is

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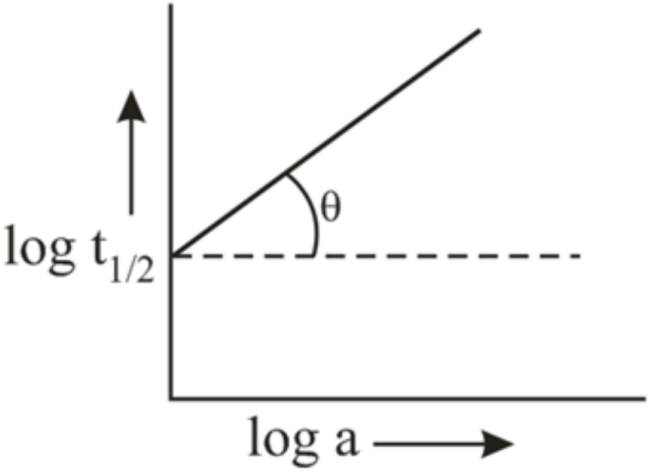
Physics Chemistry Biology

Q.34 Single Choice

The graph between $\log t_{1/2}$ and log a at a given temperature is



Rate of this reaction will ..... with passage of time

A increase

B decrease

C remains constant

Review Later | Clear | Save and Next

Rate of this reaction will .....with passage of time

A. increase

B. decrease

C. remains constant

D. first increase then decrease

Answer: C

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35. Consider the following reaction

$$CH_3 - \underset{(A)}{CH_2} - O - H + CH_3 - \underset{(B)}{\overset{O}{\overset{||}{C}}} - OH \rightarrow CH_3 - \overset{O}{\overset{||}{C}} - O - CH_2 - C$$

In the above reaction ester formation takes place by

A. Breaking of O - H bond of A and O - H bond of B

B. Breaking of C - O bond of A and C - O bond of B

C. Breaking of O - H bond of A and C - O bond of B

D. Breaking of C - O bond of A and O - H bond of B

Answer: C

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36. In the given reaction $\left[C_6H_5-CH_2-CH_2-\overset{\oplus}{N}(CH_3)_2-CH_2-CH_3\right]\overset{\Theta}{O}H \xrightarrow{\Delta}$ (X) as major product will be

A. $C_6H_5-CH=CH_2$

B. $CH_2=CH_2$

C. $C_6H_5-CH=CH-CH_3$

D. $CH_3-CH=CH-CH_3$

Answer: B

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37. Select correct statement for $Cr.\ 6NH_3.\ Cl_3$ and $Cr.5NH_2.\ Cl_3$

A. In both complex compounds secondary valency is satisfied by only NH_3

B. In both complex compounds Cl^- are satisfying only primary valency

C. In both complex compounds primary valency is satisfied by only Cl^-

D. In both complex compounds all Cl^- are ionizable

Answer: C

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38. In the reaction

$$CH_3 - C \equiv C - H \xrightarrow{CH_3MgBr} CH_4 + (A) \xrightarrow[(ii)\quad H_2O/H^{\oplus}]{(i)\quad CO_2} (B)$$ (B) will be

A. $CH_3 - C \equiv C - CH_3$

B. $CH_3 - C \equiv C - MgBr$

C. $CH_3 - C \equiv C - COOH$

D. $CH_3 - CH = CH - COOH$

Answer: C

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39. In the hober's process of ammonia manufacture,

$N_2(g) + 3H_2(g) \rightarrow 2NH_3(g)$

the rate of appearance of NH_3 is :

$$\frac{d[NH_3]}{dt} = 2 \times 10^{-4} \text{mol} L^{-1} \text{sec}^{-1}$$

The rates of the reaction expressed in terms of N_2 and H_2 will be :

	Rates in terms of H_2 (mol L^{-1} sec^{-1})	Rates in terms of N_2 (mol L^{-1} sec^{-1})
(a)	3×10^{-4}	2×10^{-4}
(b)	3×10^{-4}	1×10^{-4}
(c)	1×10^{-4}	3×10^{-4}
(d)	2×10^{-4}	2×10^{-4}

A. 3×10^{-4} 2×10^{-4}

B. 3×10^{-4} 1×10^{-4}

C. 1×10^{-4} 3×10^{-4}

D. 2×10^{-4} 2×10^{-4}

Answer: B

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40. The period number and group number of "Tantalum" (Z=73) are respectively:

A. 5,7

B. 6,13

C. 6,5

D. None of these

Answer: C

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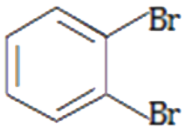
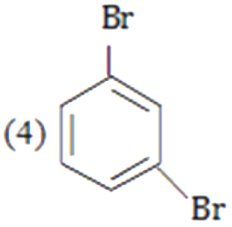
41. Which of the following will not form Grignard reagent with Mg/dry ether ?

(1) $CH_2Br - CH_2Br$ (2) $CH_2Br - CH_2 - CH_2Br$

(3) 

(4) 

Select the correct answer using the codes gives below

A. Only (4)

B. Only (2)

C. 1,2,and 3

D. 1,2,3 and 4

Answer: C

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42. A certain sample of cuprous sulphide is found to have composition $Cu_{1.8}S$, , because of imcroporation of Cu^{2+} ion in the lattice, What is the mole % of Cu^{2+} in total content in this crystal?

A. 88.88

B. 11.11

C. 99.8

D. 89.8

Answer: B

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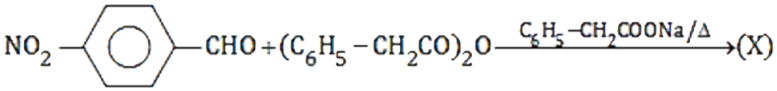
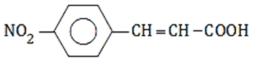
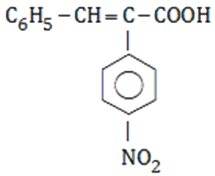
43. The product of the reaction

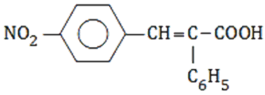


$CHO + (C_6H_5 - CHCO)_2O \xrightarrow{C_6H_5 - CH_2COONa\,/\,\Delta} (X)$ will be

A. $C_6H_5 - CH = CH - COOH$

B. 

C. 

D. 

Answer: D

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44. Which one of the following behaves both as a nucleophile and an electrophile ?

A. Acetone

B. Cyanide ion

C. Nitrite ion

D. Sulphite ion

Answer: A

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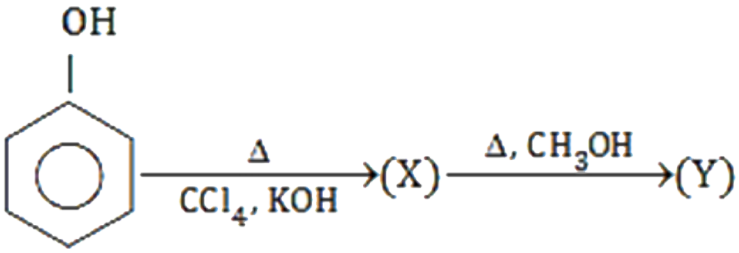
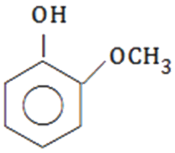
45.

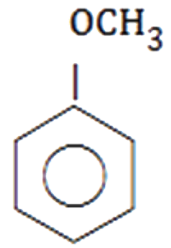


Here the compound Y is

A.



B.



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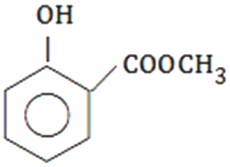
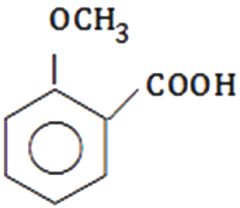


D.



Answer: C

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