



CHEMISTRY

BOOKS - TS EAMCET PREVIOUS YEAR PAPERS

TS EAMCET 2016

Chemistry

1. Assertion (A) Atoms with completely filled and half-filled subshells are stable.

Reason (R) Completely filled and half filled subshells have symmetrical distribution of electrons and have maximum exchange energy.

The correct answers is

A. (A) and (R) correct, (R) is the correct explanation of (A)

B. (A) and (R) are correct (R) is not the correct explanation of

(A)

C. (A) is correct but (R) is not correct

D. (A) is not correct but (R) is correct

Answer: a



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2. The element with the electronic configuration

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^1$ is

A. Cu

B. Ca

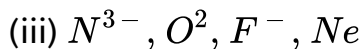
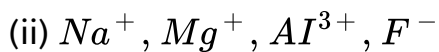
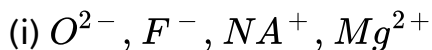
C. Cr

D. Co

Answer: a

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3. Among the following the isoelectronic specie (S) is/are



A. (i) and (ii)

B. (i), (ii) and (iii)

C. (ii) and (iii)

D. (i) and (iii)

Answer: d



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4. What is the atomic number of the element with symbol Uus?

A. 117

B. 116

C. 115

D. 114

Answer: a



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5. Match the following

List I

List II

- A. PCl_3 *i.* square planar
B. BF_3 *ii.* T-sphere
C. ClF_3 *iii.* Trigonal pyramidal
d. XeF_4 *iv* See-saw
 v. Trigonal planar

A. iv,ii,i,iii

B. iii,v,ii,iv

C. iii,v,ii,i

D. ii,iv,iii,v

Answer: c



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6. The order of covalent character of KF, KI

A. KCl lt KF lt KI

B. KI lt KCl lt KF

C. KF lt KI lt KCl

D. KF lt KCl lt KI

Answer: d



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7. If the kinetic energy in j, of CH_4 (molar mass = 16 g mol^{-1}) at T (K) is X, the kinetic energy in j, of O_2 (molar mass = 32 g mol^{-1}) at the same temperature is

A. x

B. 2x

C. x^2

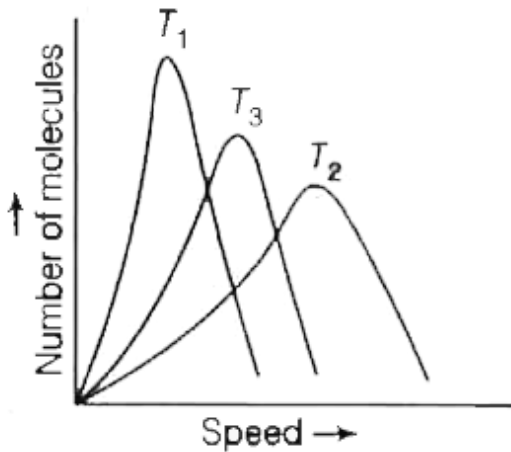
D. $\frac{x}{2}$

Answer: a

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8. The given figure shows the maxwell distribution of molecular speeds of a gas at three different temperature T_1, T_2 and T_3 .

The correct order of temperature is



A. $T_1 > T_2 > T_3$

B. $T_1 > T_a > T_2$

C. $T_3 > T_2 > T_1$

D. $T_2 > T_3 > T_1$

Answer: d

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9. In Haber's process 50.0g of N_2 [g] and 10.0 g of H_2 [g] are mixed to produce NH_3 [g]. What is the number of moles of NH_3 [g] formed?

A. 3.33

B. 2.36

C. 2.01

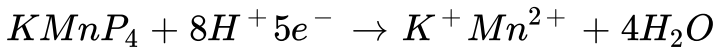
D. 5.36

Answer: a



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10. The following reaction occurs in acidic medium



what is the equivalent weight of $KMnO_4$?

[Molecular weight of $KMnO_4 = 158$]

- A. 79
- B. 31.6
- C. 158
- D. 39.5

Answer: b



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11.

Given



What is the standard enthalpy of formation of NH_3 gas ?

A. -92

B. $+46$

C. $+92$

D. -62

Answer: d



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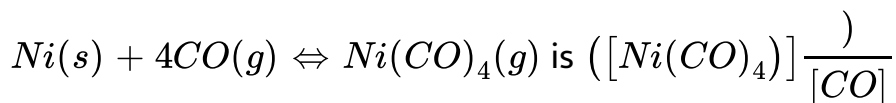
12. Which one of the following is correct?

A. The equilibrium constant (K_0) is independent of temperature

B. The value of K_0 is independent of initial concentrations of reactant and products

C. At equilibrium, the rate of the forward reaction is twice the rate of the backward reaction

D. The equilibrium constant (K_c) for the reaction



Answer: b



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13. pH of an aqueous solution of NH_4Cl is

A. 7

B. gt 7

C. lt 7

D. 1

Answer: c



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14. What is the change in the oxidation state of Mn in the reaction of MnO_4^- with H_2O_2 in acidic medium?

A. $7 \rightarrow 4$

B. $6 \rightarrow 4$

C. $7 \rightarrow 2$

D. $6 \rightarrow 2$

Answer: c

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15. Which one of the following will not give flame test?

A. Ca

B. Ba

C. Sr

D. Be

Answer: d

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16. Which one of the following forms a basic oxide?

A. B

B. TI

C. Al

D. Ga

Answer: b



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17. The gas produced by the passage of air over hot coke is

A. carbon monoxide

B. carbon dioxide

C. producer gas

D. water gas

Answer: c



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18. In environmental chemistry, the medium which is affected by a pollutant is called as the

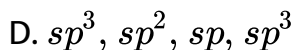
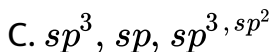
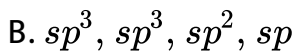
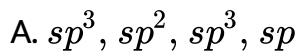
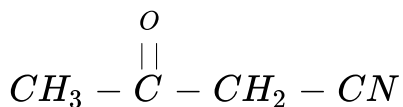
- A. sink
- B. slag
- C. solvent
- D. receptor

Answer: d



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19. The hybridisation of each carbon in the following compound respectively is



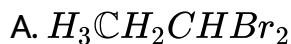
Answer: a



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20. The product Z of the following reaction is

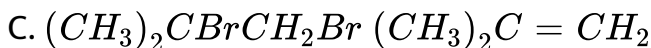
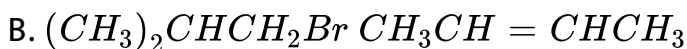
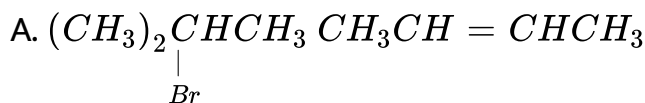
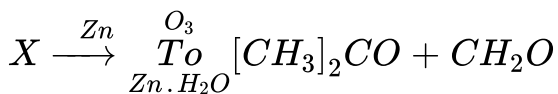


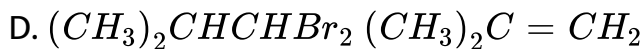


Answer: b

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21. Identify X and Y in the following reaction sequence





Answer: c

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22. The packing efficiency of simple cubic (sc.) body centred cubic (bcc) and cubic close packing (ccp) lattices follow the order

- A. bcc lt ccp lt sc
- B. ccp lt bcc lt sc
- C. sc lt ccp lt bcc
- D. sc lt bcc lt ccp

Answer: d

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23. The experimental depression in freezing point of a dilute solution is 0.025 K. if the van,t hoff factor (i) is 2.0 the calculated depression in freezing point (in K) is

A. 0.00125

B. 0.025

C. 0.0125

D. 0.05

Answer: c

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24. The molality of an aqueous dilute solution containing non-volatile solute is 0.1 m. What is the boiling temperature (in $^{\circ}C$)

of solution? (Boiling point elevation constant,

$$k_b = 0.52 \text{ kg mol}^{-1} \text{ K boiling temperature of water} = 100.^\circ \text{ C}$$

A. 100.0052

B. 100.052

C. 100

D. 100.52

Answer: b

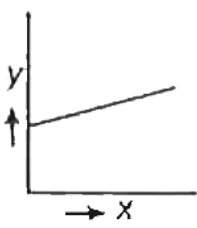


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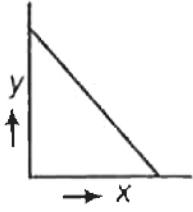
25. Which one of the following is correct plot of V_m (in $\text{S cm}^2 \text{ mol}^{-1}$) and \sqrt{C} (in $\text{mol/L}^{1/2}$) for KCl solution?

$$[y = V_m, x = \sqrt{C}]$$

A.



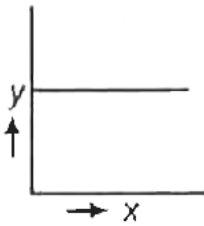
B.



C.



D.

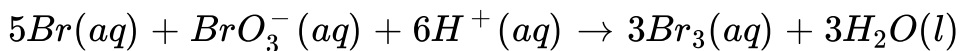


Answer: b



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26. For the reaction



If,

$$-\frac{\Delta[\text{Br}]}{\Delta t} = 0.05 \text{ mol L}^{-1} \text{ min}^{-1}, \quad -\frac{\Delta[\text{BrO}_3]}{\Delta t} \in \text{ mol L}^{-1} \text{ min}^{-1} \text{ is}$$

A. 0.01

B. 0.3

C. 0.03

D. 0.005

Answer: c



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27. Which one of the following is an emulsion?

A. milk

B. soap lather

C. butter

D. vanishing cream

Answer: a



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28. Copper matte contains

A. Cu_2O, Cu_2S

B. Cu_2, O, FeO

C. Cu_2S, FeS

D. Cu_2S, FeO

Answer: c



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29. X reacts with dilute nitric acid to form laughing gas . What is X?

A. Cu

B. P_a

C. S_a

D. Zn

Answer: d



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30. Xenon reacts with fluorine at 873 K and 7 bar to form XeF_4 .

In this reaction, the ratio of xenon and fluorine required is

A. 1 : 5

B. 10 : 1

C. 1 : 3

D. 5 : 1

Answer: a



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31. Which of the following metal ions has a calculated magnetic moment value of $\sqrt{24}$ BM ?

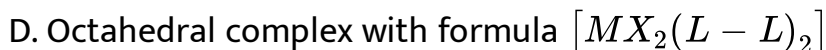
A. Mn^{2+}



Answer: b

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32. Which one of the following does not exhibit geometrical isomerism ?



Answer: c

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33. The poly dispersity index (PDI) of a polymer is (\overline{M}_w = weight average molecular mass and \overline{M}_n number average molecular mass)

- A. the product of \overline{M}_n and \overline{M}_w
- B. the sum of \overline{M}_n and \overline{M}_w
- C. the difference between \overline{M}_w and \overline{M}_n
- D. the ratio between \overline{M}_w and \overline{M}_n

Answer: d

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34. Hormone that maintains the blood glucose level within the limit is

- A. thyroxine
- B. insulin
- C. testosterone
- D. epinephrine

Answer: b



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35. Chloroxylenol is an example of

- A. antiseptic
- B. antipyretic

C. analgesic

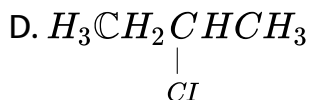
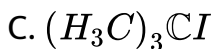
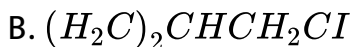
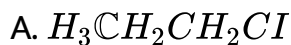
D. tranquiliser

Answer: a



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36. Which one of the following has highest boiling point?



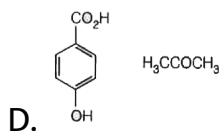
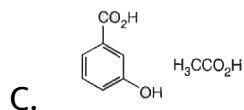
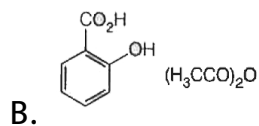
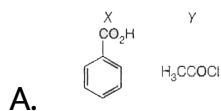
Answer: a



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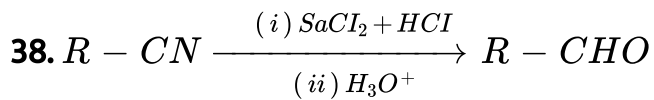


Identify X and Y from the following



Answer: b

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What is the name of the above reaction ?

A. rosenmund

B. williamson

C. stephen

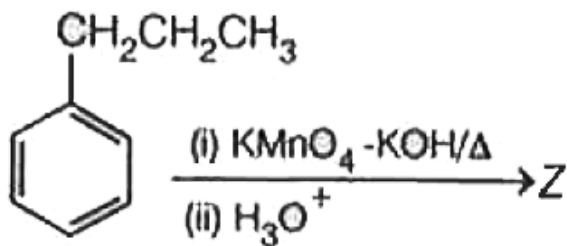
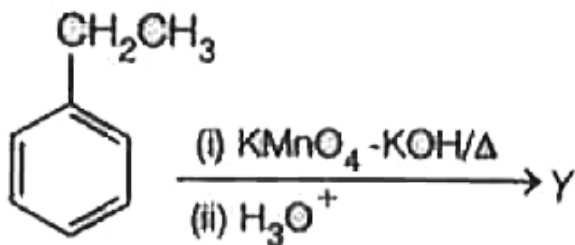
D. Kolbe

Answer: c

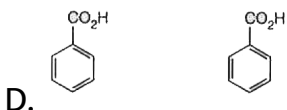
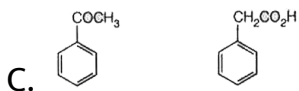
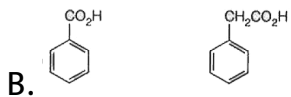
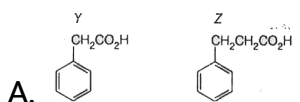


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39. Consider the following reaction,



What are the structure of Y and Z?

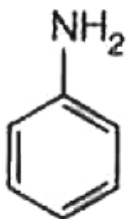


Answer: d

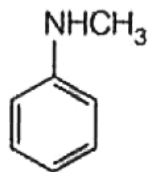
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40. What is the strongest among the following?

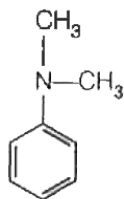
A. H_3CNH_2



B.



C.



D.

Answer: a



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