

80 previous-year questions, questions only — solve them first. The official answer key is on the last page.

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NSEC 2012

Time: 120 minutes · Maximum marks: 240 · Questions: 80

1. An electron releasing group will not stabilize which of the following groups ?

(A) Carbocation

(B) carbanion

(C) Free radical

(D) any of the above

[3 marks, -1 for a wrong answer]

2. The bond order for a species with the configuration $\sigma 1s^2 \sigma^* 1s^2 \sigma 2s^2 \sigma^* 2s^2 \sigma p_x^1$ will be -

(A) 1

(B) $1/2$

(C) Zero

(D) $3/2$

[3 marks, -1 for a wrong answer]

3. The widest range over which electronic excitations in organic compounds occur, is -

(A) 200 nm – 780 nm

(B) 220 nm – 500 nm

(C) 250 nm – 700 nm

(D) 290 nm – 1000 nm

[3 marks, -1 for a wrong answer]

4. Which of the following compounds has the least tendency to form hydrogen bonds between molecules ?

(A) NH_3

(B) H_2NOH

(C) HF

(D) CH_3F

[3 marks, -1 for a wrong answer]

5. The species in which the central atom uses sp^2 hybrid orbitals is -

(A) PH_3

(B) NH_3

(C) CH_3^+

(D) SbH_3

[3 marks, -1 for a wrong answer]

6. α -D(+) glucose and β -D(+) glucose are -

(A) Enantiomers

(B) Geometrical isomers

(C) Epimers

(D) Anomers

[3 marks, -1 for a wrong answer]

7. The chemical formula of 'laughing gas' is -

(A) NO

(B) N₂O

(C) N₂O₄

(D) N₂O₅

[3 marks, -1 for a wrong answer]

8. The enzyme which hydrolyses triglycerides to fatty acids and glycerol is -

(A) Lipase

(B) maltase

(C) pepsin

(D) zymase

[3 marks, -1 for a wrong answer]

9. In which of the following ion/molecule, the 'S' atom does not assume sp³ hybridization ?

(A) SO₄²⁻

(B) SF₄

(C) SF₂

(D) S₈

[3 marks, -1 for a wrong answer]

10. The most stable free radical which can be isolated is -

(A) Trityl radical

(B) Diphenyl methyl radical

(C) 2,4,6-Tri-ter-butylphenoxy radical

(D) tert-butyl radical

[3 marks, -1 for a wrong answer]

11. Phosphine is prepared by the reaction of

(A) P and HNO₃

(B) P and H₂SO₄

(C) P and NaOH

(D) P and H₂S

[3 marks, -1 for a wrong answer]

12. Pheromones are chemical substances which are

(A) formed by fermentation process of fungi

(B) secreted by endocrine glands of man

(C) secreted by insects

(D) plant growth hormones

[3 marks, -1 for a wrong answer]

13. Which of the following does not reduce Benedict's solution ?

- (A) Glucose
- (B) Fructose
- (C) Sucrose
- (D) Aldehyde

[3 marks, -1 for a wrong answer]

14. The inorganic precipitate which acts as a semipermeable membrane is

- (A) Calcium phosphate
- (B) Nickel phosphate
- (C) Plaster of paris
- (D) Copper ferrocyanide

[3 marks, -1 for a wrong answer]

15. The genetic material of a cell is made of

- (A) nucleic acids
- (B) proteins
- (C) carbohydrates
- (D) fats

[3 marks, -1 for a wrong answer]

16. Lanthanide contraction is caused due to

- (A) the appreciable shielding on outer electrons by 4f electrons from the nuclear charge
- (B) the appreciable shielding on outer electrons by 5d electrons from the nuclear charge
- (C) the same effective nuclear charge from Ce to Lu
- (D) the imperfect shielding on outer electrons by 4f electrons from the nuclear charge

[3 marks, -1 for a wrong answer]

17. Which of the following contain maximum number of electrons in the antibonding molecular orbitals

- (A) O_2^{2-}
- (B) O_2
- (C) O_2^{-1}
- (D) O_2^{+}

[3 marks, -1 for a wrong answer]

18. Lattice energy for an ionic compound is calculated by using

- (A) Kirchoff's equation
- (B) Markownikoff's rule
- (C) Born Haber cycle
- (D) Carnot cycle

[3 marks, -1 for a wrong answer]

19. If the radius of the first Bohr orbit is r , then the de-Broglie wavelength in the third Bohr orbit is

- (A) $2\pi r$
- (B) $9r$
- (C) $r/3$
- (D) $6\pi r$

[3 marks, -1 for a wrong answer]

20. The IUPAC name of $[\text{Co}(\text{ONO})(\text{NH}_3)_5\text{Cl}_2]$ is

- (A) pentamminenitrocobalt(II)chloride
(C) pentamminenitritocobalt(III)chloride

- (B) pentamminenitrosocobalt(III)chloride
(D) pentammineoxo-nitrocobalt(III)chloride

[3 marks, -1 for a wrong answer]

21. In the Vander wall equation of state for a non ideal gas the term that accounts for intermolecular force is

(A) $(V - b)$

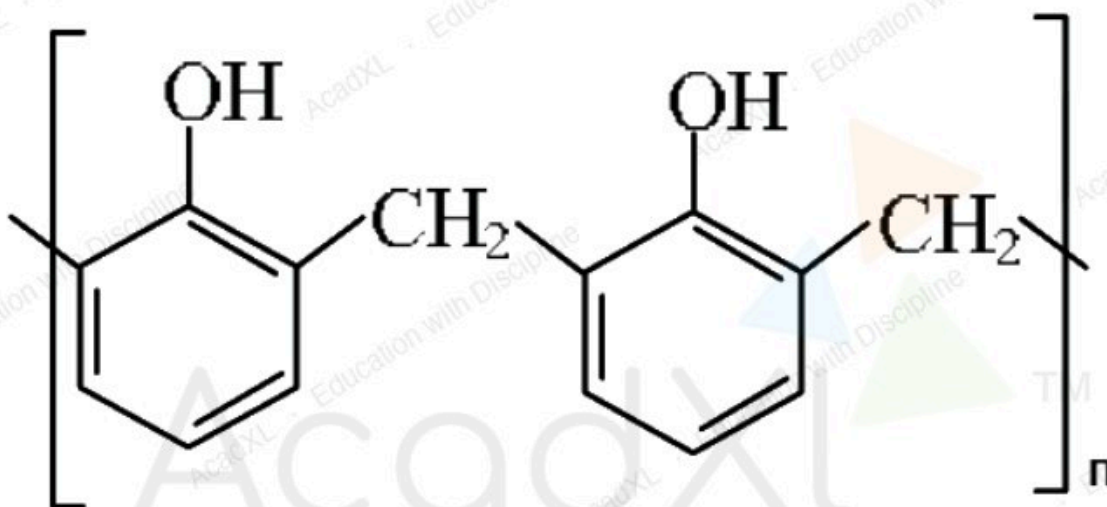
(B) RT

(C) $(P + \frac{a}{v^2})$

(D) $1/RT$

[3 marks, -1 for a wrong answer]

22. The structure given below represents



(A) Isoprene Rubber

(B) Bakelite

(C) PVC

(D) Nylon 6,6

[3 marks, -1 for a wrong answer]

23. The maximum amount of CH_3Cl that can be prepared from 20 g of CH_4 and 10 g of Cl_2 by the following reaction, is $\text{CH}_4 + \text{Cl}_2 \rightarrow \text{CH}_3\text{Cl} + \text{HCl}$, (pressure that no other reaction is taking place)

(A) 3.625 mole

(B) 0.141 mole

(C) 1.41 mole

(D) 0.365 mole

[3 marks, -1 for a wrong answer]

24. Which isomer of xylene can give three different monochloroderivative ?

(A) o-xylene

(B) m-xylene

(C) p-xylene

(D) xylene cannot give a monochloro derivative

[3 marks, -1 for a wrong answer]

25. The most Carbocations, carbanions, free radicals and radical cation are reactive carbon intermediates. Their hybrid orbitals respectively are

(A) sp^2 , sp^2 , sp^3 , sp

(B) sp^2 , sp^2 , sp , sp^3

(C) sp^2 , sp^3 , sp^2 , sp

(D) sp^3 , sp^2 , sp , sp^2

[3 marks, -1 for a wrong answer]

26. effective electrolyte to cause the flocculation of a negatively charged arsenium sulphide colloid is :

(A) NaCl

(B) $BaCl_2$

(C) $K_3Fe(CN)_6$

(D) $AlCl_3$

[3 marks, -1 for a wrong answer]

27. The electronegativities of acetylene, ethylene and ethane are in the order

(A) ethylene > acetylene > ethane

(B) acetylene > ethylene > ethane

(C) ethane > acetylene > ethylene

(D) acetylene > ethane > ethylene

[3 marks, -1 for a wrong answer]

28. A catalyst accelerates a reaction primarily by stabilizing the

(A) substrate

(B) product

(C) intermediate

(D) transition state

[3 marks, -1 for a wrong answer]

29. The number of transition states in a unimolecular nucleophilic substitution (S_N^1) reaction is

(A) 0

(B) 1

(C) 2

(D) 3

[3 marks, -1 for a wrong answer]

30. The dipole moments of halo compounds are in the order

(A) $CHCl_3 > CCl_4 > CHCl_2 > cis-CHCl=CHCl$ (B) $cis-CHCl=CHCl > CHCl_3 > CH_2Cl_2 > CCl_4$

(C) $cis-CHCl=CHCl > CH_2Cl_2 > CHCl_3 > CCl_4$ (D) $CHCl_3 > CHCl_2 > cis-CHCl=CHCl > CCl_4$

[3 marks, -1 for a wrong answer]

31. Which of the following information is not provided by a reaction mechanism ?

(A) Which bonds are formed and which bonds are broken

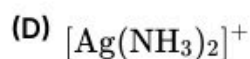
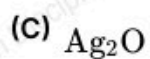
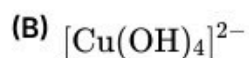
(B) Which intermediates and transition states are formed

(C) Energy content of the reacting species

(D) Which is the slowest step

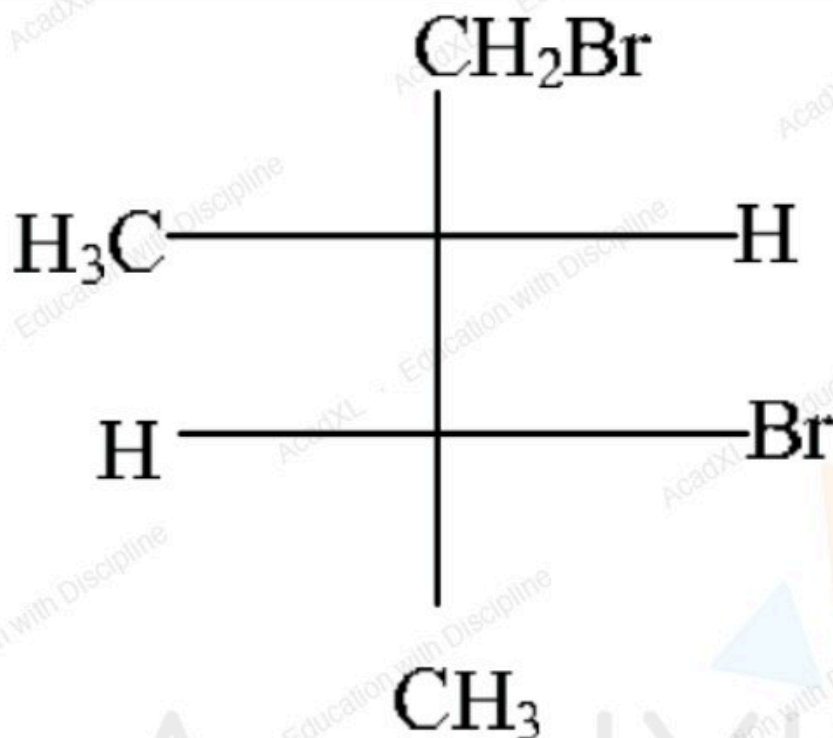
[3 marks, -1 for a wrong answer]

32. Tollen's reagent is



[3 marks, -1 for a wrong answer]

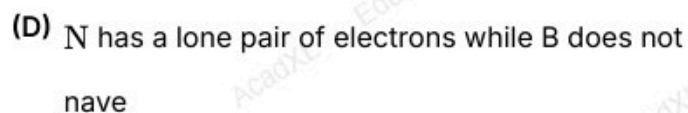
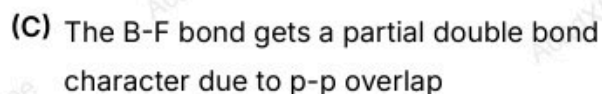
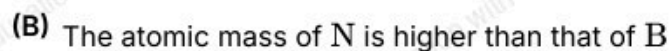
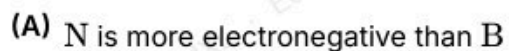
33. The R/S designation for the following stereoisomer of 1,3-dibromo-2-methylbutane is



[3 marks, -1 for a wrong answer]

34. The bond energy of B-F bond in BF_3 is 646 kJ mol^{-1} , while that of N-F bond in NF_3 is 280 kJ mol^{-1} .

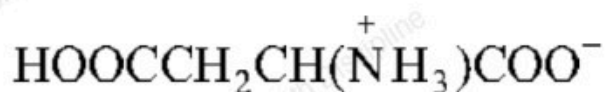
This is because



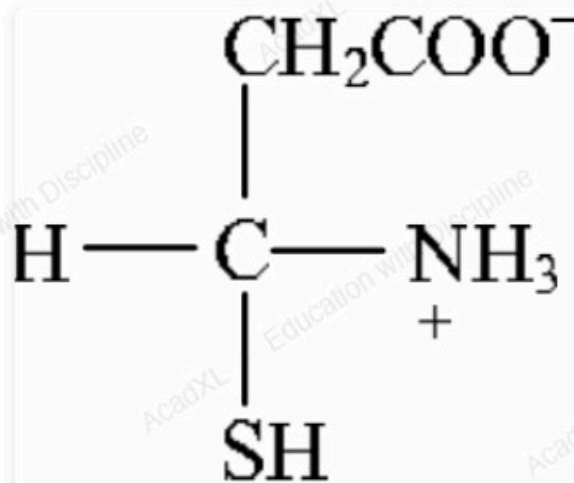
[3 marks, -1 for a wrong answer]

35. The amino acid that cannot be obtained by hydrolysis of proteins is -

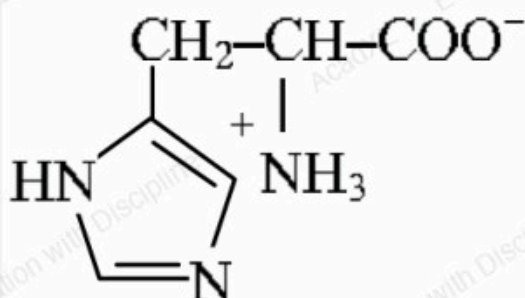
(A)



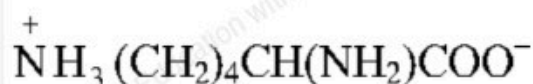
(B)



(C)



(D)



[3 marks, -1 for a wrong answer]

36. When equal volumes of the following solutions are mixed precipitation of AgCl ($k_{SP} = 1.8 \times 10^{-10}$) will occur only with -

(A) 10^{-4} M Ag^+ and 10^{-4} M Cl^-

(B) 10^{-5} M Ag^+ and 10^{-5} M Cl^-

(C) 10^{-6} M Ag^+ and 10^{-6} M Cl^-

(D) 10^{-10} M Ag^+ and 10^{-10} M Cl^-

[3 marks, -1 for a wrong answer]

37. The quantum numbers for the 19^{th} electron of Cr ($Z = 24$) are -

(A) $n = 3, l = 0, m = 0, s = +\frac{1}{2}$

(B) $n = 4, l = 0, m = 0, s = +\frac{1}{2}$

(C) $n = 3, l = 2, m = 2, s = +\frac{1}{2}$

(D) $n = 4, l = 2, m = 2, s = +\frac{1}{2}$

[3 marks, -1 for a wrong answer]

38. The oxidation of SO_2 by O_2 to SO_3 is an exothermic reaction. The yield of SO_3 can be maximized if -

- (A) temperature is increased and pressure is kept constant
(B) temperature is decreased and pressure is increased
(C) both temperature and pressure are increased
(D) both temperature and pressure are decreased

[3 marks, -1 for a wrong answer]

39. Which of the following ion is colourless -

- (A) Mn^{2+}
(B) Cu^+
(C) Cr^{3+}
(D) Fe^{2+}

[3 marks, -1 for a wrong answer]

40. Which of the following has a positive entropy change ?

- (A) $\text{H}_2\text{O}(\text{g}) \rightarrow \text{H}_2\text{O}(\text{l})$
(B) $\text{BF}_3(\text{g}) + \text{NH}_3(\text{g}) \rightarrow \text{F}_3\text{B} \cdot \text{NH}_3(\text{s})$
(C) $2\text{SO}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{SO}_3(\text{g})$
(D) $2\text{NH}_4\text{NO}_3(\text{s}) \rightarrow 2\text{N}_2(\text{g}) + 4\text{H}_2\text{O}(\text{l}) + \text{O}_2(\text{g})$

[3 marks, -1 for a wrong answer]

41. Equal volumes of two solutions of $\text{pH} = 2$ and $\text{pH} = 4$ are mixed together. The pH of the resulting solution will be -

- (A) 2.0
(B) 3.1
(C) 4.2
(D) 2.3

[3 marks, -1 for a wrong answer]

42. A first order reaction is 20% complete in 600 s. The time required to complete 75% of the same reaction will be -

- (A) 3120 s
(B) 3720 s
(C) 4320 s
(D) 4920 s

[3 marks, -1 for a wrong answer]

43. The vapour density of gas A is four times that of B. If the molecular mass of B is M then molecular mass of A is -

- (A) M
(B) $4M$
(C) $M/4$
(D) $2M$

[3 marks, -1 for a wrong answer]

44. Among the isomers of dimethylcyclohexanes, the chiral ones are -

(A) 1,2-trans and 1,3-cis

(B) 1,2-cis and 1,3-trans

(C) 1,3-trans and 1,4-trans

(D) 1,2-trans and 1,3-trans

[3 marks, -1 for a wrong answer]

45. The relative basic strengths of NH_3 , CH_3NH_2 and NF_3 are in the order -

(A) $\text{CH}_3\text{NH}_2 > \text{NH}_3 > \text{NF}_3$

(B) $\text{NH}_3 > \text{CH}_3\text{NH}_2 > \text{NF}_3$

(C) $\text{NF}_3 > \text{CH}_3\text{NH}_2 > \text{NH}_3$

(D) $\text{CH}_3\text{NH}_2 > \text{NF}_3 > \text{NH}_3$

[3 marks, -1 for a wrong answer]

46. The outermost electronic configuration of the most electronegative element is -

(A) ns^2, np^3

(B) $ns^2, np^6 (n-1)d^5$

(C) ns^2, np^5

(D) ns^2, np^6

[3 marks, -1 for a wrong answer]

47. The conductivity of a metal decreases with increase in temperature because -

(A) the kinetic energy of the electrons increases

(B) the movement of electrons becomes haphazard

(C) the ions start vibrating

(D) the metal becomes hot and starts emitting radiation

[3 marks, -1 for a wrong answer]

48. The lanthanide compound which is used as a most powerful liquid laser after dissolving in selenium oxychloride is

(A) Cerium oxide

(B) Neodymium oxide

(C) Promethium sulphate

(D) Cerium sulphate

[3 marks, -1 for a wrong answer]

49. The solubility of SrF_2 in water at 303 K is $9.55 \times 10^{-5} \text{ mol dm}^{-3}$. The solubility product of the salt is -

(A) 8.7×10^{-17}

(B) 9.1×10^{-11}

(C) 9.55×10^{-5}

(D) 3.48×10^{-12}

[3 marks, -1 for a wrong answer]

50. The amount of electricity required to deposit 1.0 mole of aluminium from a solution of AlCl_3 will be -

- (A) 1 faraday (B) 3 faraday
(C) 0.33 faraday (D) 1.33 faraday

[3 marks, -1 for a wrong answer]

51. In the reaction, $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$ when 36.75 g of KClO_3 is heated, the volume of oxygen evolved at N.T.P. will be -

- (A) 9.74 dm^3 (B) 8.92 dm^3
(C) 10.08 dm^3 (D) 22.4 dm^3

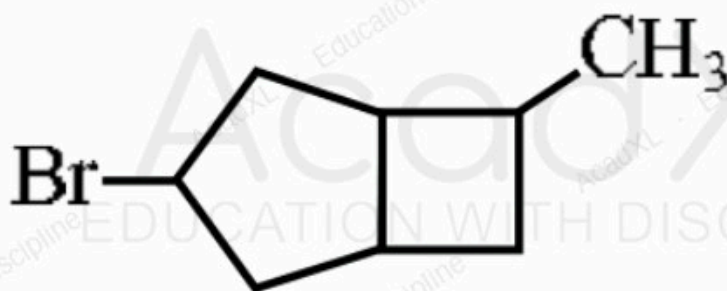
[3 marks, -1 for a wrong answer]

52. The pK_a value of H_2O of picric acid, acetic acid and phenol are in the order -

- (A) picric acid 0.4, acetic acid 4.75, phenol 10.0 (B) acetic acid 0.4, picric acid 4.75, phenol 10.0
(C) picric acid 0.4, phenol 4.75, acetic acid 10.0 (D) phenol 0.4, acetic acid 4.75, picric acid 10.0

[3 marks, -1 for a wrong answer]

53. The correct IUPAC name of the following compound is -



- (A) 2-Bromo-5-methylbicyclo[5.4.0] heptanes (B) 3-Bromo-7-methylbicyclo[3.2.0] heptanes
(C) 3-Bromo-6-methylbicyclo[3.2.0] heptanes (D) 2-Methyl-6-bromobicyclo[2.3.0] heptanes

[3 marks, -1 for a wrong answer]

54. The first ionization potential of Na, Mg, Al and Si are in the order -

- (A) $\text{Na} < \text{Mg} > \text{Al} < \text{Si}$ (B) $\text{Na} > \text{Mg} > \text{Al} > \text{Si}$
(C) $\text{Na} < \text{Mg} < \text{Al} > \text{Si}$ (D) $\text{Na} > \text{Mg} > \text{Al} < \text{Si}$

[3 marks, -1 for a wrong answer]

55. The first four ionization energy values of a metal are 191, 587, 872 and 5962 kcal/mol respectively. The number of valence electrons in the element is -

(A) 1

(B) 2

(C) 3

(D) 5

[3 marks, -1 for a wrong answer]

56. An aqueous solution of a salt 'X' gives white precipitate with dilute H_2SO_4 . The same solution with a few drops of aq. KI gives golden yellow precipitate which dissolves on heating. The salt 'X' is -

(A) $\text{Ba}(\text{NO}_3)_2$

(B) $\text{Sr}(\text{NO}_3)_2$

(C) $\text{Pb}(\text{NO}_3)_2$

(D) $\text{Zn}(\text{NO}_3)_2$

[3 marks, -1 for a wrong answer]

57. The rate of the reaction $\text{MnO}_4^- (\text{aq}) + 8\text{H}^+ (\text{aq}) + 5\text{Fe}^{2+} (\text{aq}) \rightarrow \text{Mn}^{2+} (\text{aq}) + 5\text{Fe}^{3+} (\text{aq}) + 4\text{H}_2\text{O}$ can be best measured by monitoring colorimetrically the concentration of -

(A) $\text{MnO}_4^- (\text{aq})$

(B) $\text{Mn}^{2+} (\text{aq})$

(C) $\text{Fe}^{2+} (\text{aq})$

(D) $\text{Fe}^{3+} (\text{aq})$

[3 marks, -1 for a wrong answer]

58. Which of the following observation indicates colligative properties ? I. A 0.5 M NaBr solution has a higher vapour pressure than 0.5 M BaCl_2 . II. A 0.5 M NaOH solution freezes at a lower temperature than pure water. III. Pure water freezes at a higher temperature than pure ethanol

(A) only I

(B) only II

(C) only III

(D) I and II

[3 marks, -1 for a wrong answer]

59. A 500 g toothpaste sample has 0.4 g fluoride concentration. The fluoride concentration in terms of ppm will be -

(A) 200

(B) 400

(C) 500

(D) 800

[3 marks, -1 for a wrong answer]

60. Among the following carbon centered reactive intermediates, the carbon that has octet of electrons is -

(A) carbocation

(B) carbanion

(C) carbene

(D) radical

[3 marks, -1 for a wrong answer]

61. The molecule that has maximum covalent character -

(A) NaH

(B) Na₂S

(C) CaCl₂

(D) SnCl₄

[3 marks, -1 for a wrong answer]

62. The mode of expression in which the concentration remains independent of temperature is -

(A) molarity

(B) normality

(C) formality

(D) molality

[3 marks, -1 for a wrong answer]

63. The enthalpy changes for the following reactions are $C_{\text{diamond}} + O_{2(g)} \rightarrow CO_{2(g)}$,

$\Delta H = -395.3 \text{ kJ mol}^{-1}$; $C_{\text{graphite}} + O_{2(g)} \rightarrow CO_{2(g)}$, $\Delta H = -393.4 \text{ kJ mol}^{-1}$. The enthalpy

change for the transition $C_{\text{diamond}} \rightarrow C_{\text{graphite}}$ will be -

(A) -3.8 kJ mol^{-1}

(B) $+3.8 \text{ kJ mol}^{-1}$

(C) -1.9 kJ mol^{-1}

(D) $+1.9 \text{ kJ mol}^{-1}$

[3 marks, -1 for a wrong answer]

64. The sequence of steps involved in aromatic nucleophilic substitution involving a benzyne intermediate is -

(A) addition-elimination

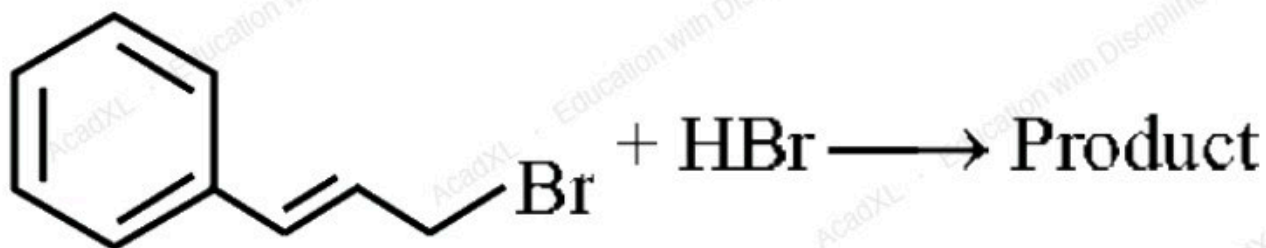
(B) elimination-addition

(C) addition-rearrangement

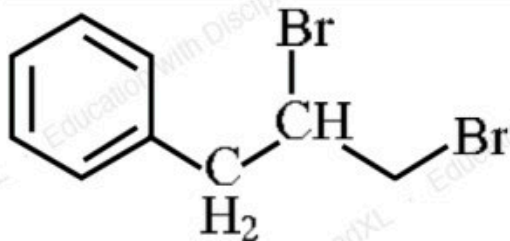
(D) elimination-rearrangement

[3 marks, -1 for a wrong answer]

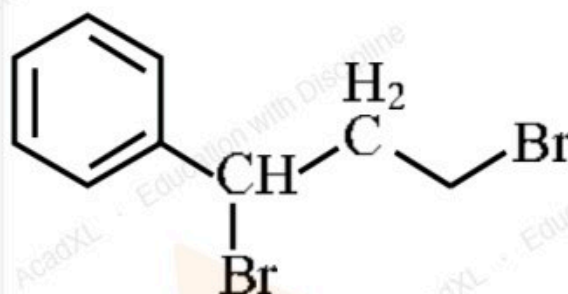
65. Cinnamyl bromide ($\text{C}_6\text{H}_5\text{CH}=\text{CHCH}_2\text{Br}$) reacts with HBr to give a product. The product in the above reaction is -



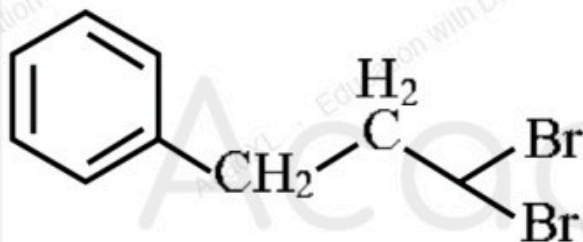
(A)



(B)



(C)



(D)

This reaction cannot take place

[3 marks, -1 for a wrong answer]

66. The commercial name of calcium hydride is -

(A) lime

(B) hydrolyth

(C) slaked lime

(D) calgon

[3 marks, -1 for a wrong answer]

67. The number of moles of KMnO_4 that will be needed to react completely with one mole of ferrous oxalate $[\text{Fe}(\text{C}_2\text{O}_4)]$ in acidic solution is -

(A) 1

(B) $\frac{2}{5}$

(C) $\frac{3}{5}$

(D) $\frac{4}{5}$

[3 marks, -1 for a wrong answer]

68. Protein and DNA being charged molecules, can be separated by -

(A) Electrophoresis

(B) Centrifugation

(C) Filtration

(D) Spectrophotometry

[3 marks, -1 for a wrong answer]

69. The biomolecule which does not have a secondary structure is -

(A) protein

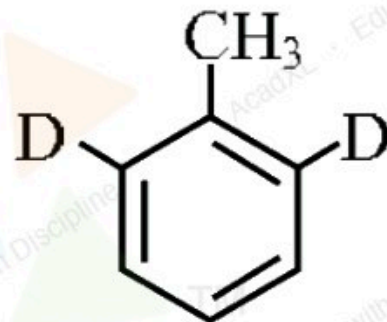
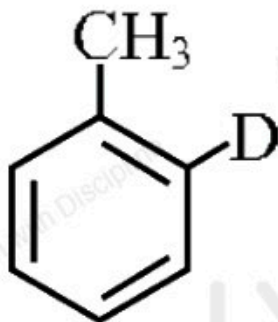
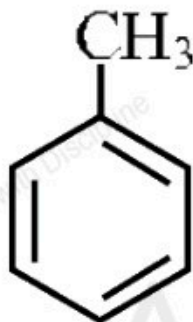
(B) lipid

(C) DNA

(D) RNA

[3 marks, -1 for a wrong answer]

70. The rate of o-nitration of the above compounds, (I) toluene, (II) 2-D-toluene and (III) 2,6-D₂-toluene are in the following order -



(A) I > II > III

(B) II > I > III

(C) III > I > II

(D) The rate is the same for all the three compounds

[3 marks, -1 for a wrong answer]

71. In which of the following reaction is $K_p > K_c$

(A) $\text{H}_2 + \text{I}_2 \rightarrow 2\text{HI}$

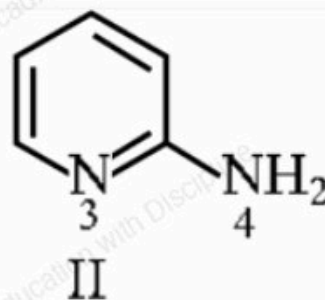
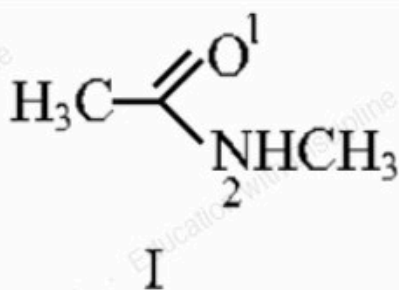
(B) $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$

(C) $2\text{SO}_3 \rightarrow 2\text{SO}_2 + \text{O}_2$

(D) $\text{PCl}_3 + \text{Cl}_2 \rightarrow \text{PCl}_5$

[3 marks, -1 for a wrong answer]

72. The preferred sites of protonation in the following compounds are



(A) 1 and 3

(B) 2 and 4

(C) 1 and 4

(D) 2 and 3

[3 marks, -1 for a wrong answer]

73. Which of the following vibrational modes show no IR absorption bands

(A) Symmetric CO_2 stretch

(B) Antisymmetric CO_2 stretch

(C) Symmetric $\text{S}=\text{C}=\text{O}$ stretch

(D) Antisymmetric $\text{S}=\text{C}=\text{O}$ stretch

[3 marks, -1 for a wrong answer]

74. The crimson colour imparted to flame is due to a salt of -

(A) barium

(B) copper

(C) calcium

(D) strontium

[3 marks, -1 for a wrong answer]

75. Which of the following weighs less when weighed in magnetic field ?

(A) ScCl_3

(B) FeCl_3

(C) TiCl_3

(D) VCl_3

[3 marks, -1 for a wrong answer]

76. Essential vitamin required for the production of RBCs is -

(A) Folic acid

(B) Nicotinic acid

(C) Pantothenic acid

(D) None of the above

[3 marks, -1 for a wrong answer]

77. For the reaction $\text{NH}_4^+ + \text{NO}_2^- \rightarrow \text{N}_2 + 2\text{H}_2\text{O}$ the following data was recorded (concentrations in M,

Rate in M s^{-1}): Set 1: $[\text{NH}_4^+] = 0.010$, $[\text{NO}_2^-] = 0.020$, Rate = 0.020; Set 2: $[\text{NH}_4^+] = 0.015$,

$[\text{NO}_2^-] = 0.020$, Rate = 0.030; Set 3: $[\text{NH}_4^+] = 0.010$, $[\text{NO}_2^-] = 0.010$, Rate = 0.005

(A) $\text{rate} = K[\text{NH}_4^+][\text{NO}_2^-]$

(B) $\text{rate} = K[\text{NH}_4^+]^2[\text{NO}_2^-]$

(C) $\text{rate} = K[\text{NH}_4^+][\text{NO}_2^-]^2$

(D) $\text{rate} = K[\text{NH}_4^+]^2[\text{NO}_2^-]^2$

[3 marks, -1 for a wrong answer]

78. In a nitration experiment, 10.0 g of benzene gave 13.2 g of nitrobenzene. The percentage yield is -

(A) 83.5%

(B) 62.7%

(C) 88.9%

(D) 26.7%

[3 marks, -1 for a wrong answer]

79. The rate constant of a reaction increases by 5% when the temperature is increased from 27°C to 28°C . Therefore, the energy of activation of the reaction is -

(A) 36.6 kJ mol^{-1}

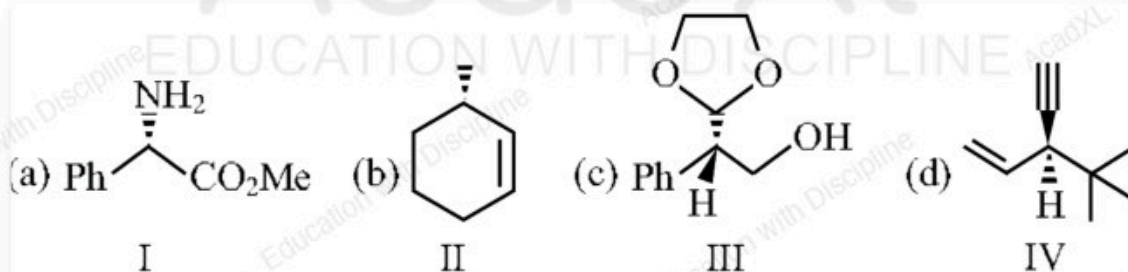
(B) 46.6 kJ mol^{-1}

(C) 16.6 kJ mol^{-1}

(D) 26.6 kJ mol^{-1}

[3 marks, -1 for a wrong answer]

80. Which one of the following compounds has R configuration ?



(A) I

(B) II

(C) III

(D) IV

[3 marks, -1 for a wrong answer]

Answer key

1. B	2. B	3. A	4. D	5. C	6. D
7. B	8. A	9. B	10. C	11. C	12. C
13. C	14. D	15. A	16. D	17. A	18. C
19. D	20. C	21. C	22. B	23. B	24. B
25. C	26. D	27. B	28. D	29. C	30. C
31. C	32. D	33. A	34. C	35. B	36. A
37. B	38. B	39. B	40. D	41. D	42. B
43. B	44. D	45. A	46. C	47. B	48. B
49. D	50. B	51. C	52. A	53. C	54. A
55. C	56. C	57. A	58. D	59. D	60. B
61. D	62. D	63. C	64. B	65. B	66. B
67. C	68. A	69. B	70. D	71. C	72. A
73. A	74. D	75. A	76. A	77. C	78. A
79. A	80. D				

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