

NEET 2026 Chemistry

Question Paper PDF

Conducted by National Testing Agency (NTA)



General Instructions

- (i) The test is of 1 hours duration.
- (ii) This test paper consists of 45 questions. The maximum marks are 180.
- (iii) Each question carries +4 marks for correct answer and –1 mark for wrong answer.

Chemistry

1. The correct statement with regard to the secondary structure of DNA/RNA is:

- (A) DNA possesses a single strand helix structure and contains uracil as one of the four bases.
- (B) DNA possesses a double strand helix structure and contains thymine as one of the four bases.
- (C) RNA possesses a double strand helix structure and contains uracil as one of the four bases.
- (D) RNA possesses a single strand helix structure and contains thymine as one of the four bases.

2. Match List-I with List-II. List-I contains quantum numbers and List-II contains orbitals.

	List-I (Quantum numbers)			List-II (Orbital)
	'n'	'l'		
(A)	2	1	(I)	3d
(B)	4	0	(II)	2p
(C)	5	3	(III)	4s
(D)	3	2	(IV)	5f

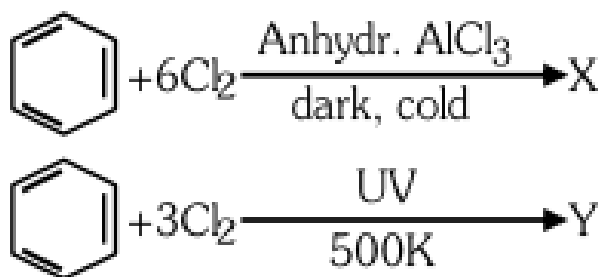
- (A) A-II, B-III, C-I, D-IV

- (B) A-II, B-III, C-IV, D-I
(C) A-IV, B-II, C-III, D-I
(D) A-I, B-II, C-III, D-IV
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3. During Lassaigne's test, the elements present in an organic compound are converted from:

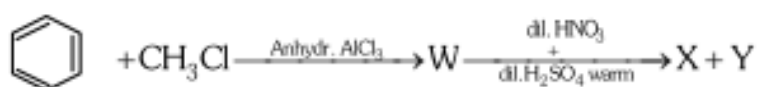
- (A) Covalent form to ionic form
(B) Covalent form to covalent form
(C) Ionic form to ionic form
(D) Ionic form to covalent form
-

4. The number of chlorine atoms present in the organic products *X* and *Y* of the following reactions



- (A) 1 and 6
(B) 6 and 3
(C) 3 and 3
(D) 6 and 6
-

5. Two products *X* and *Y* are formed in the following reaction sequence.



The suitable method that can be used for separation of products *X* and *Y* is:

- (A) Sublimation
 - (B) Differential extraction
 - (C) Continuous extraction
 - (D) Fractional distillation
-

6. Identify the correct statement about ClF_3 from the following options

- (A) It has T-shaped geometry with three lone pairs on Cl atom.
 - (B) It has planar trigonal geometry with two lone pairs on Cl atom.
 - (C) It has T-shaped geometry with two lone pairs on Cl atom.
 - (D) It has trigonal pyramidal geometry with two lone pairs on Cl atom.
-

7. The functional group that can be identified through phthalein dye test is:

- (A) Alcohol
 - (B) aldehyde
 - (C) Phenolic
 - (D) Carboxylic acid
-

8. A solution of copper sulphate is electrolysed for 10 minutes with a current of 1.5 amperes. The mass of copper deposited at cathode is:

(Given: Molar mass of Cu = 63 g mol⁻¹, 1 F = 96487 C mol⁻¹)

- (A) 0.2938 g
 - (B) 1.7018 g
 - (C) 2.4036 g
 - (D) 0.5876 g
-

9. Match List I with List II regarding transition metals/compounds and their catalytic roles:

	List-I (Transition metal/ Compound/complex)		List-II (Catalytic Role)
A.	V_2O_5	I.	Preparation of ammonia from N_2/H_2 mixture
B.	Fe	II.	Polymerisation of alkynes
C.	$PdCl_2$	III.	Preparation of H_2SO_4 from SO_2
D.	Ni complex	IV.	Oxidation of ethyne to ethanal

(A) A-III, B-I, C-IV, D-II

(B) A-III, B-IV, C-I, D-II

(C) A-IV, B-I, C-III, D-II

(D) A-II, B-IV, C-I, D-III

10. Match List I with List II regarding coordination complexes and their shapes:

List I (Complex/ion)	List II (Shape/geometry)
A. $[PtCl_2(NH_3)_2]$	I. Octahedral
B. $[Co(NH_3)_6]Cl_3$	II. Trigonal bipyramidal
C. $[NiCl_4]^{2-}$	III. Square planar
D. $[Fe(CO)_5]$	IV. Tetrahedral

(A) A-IV, B-I, C-III, D-II

(B) A-III, B-I, C-IV, D-II

(C) A-I, B-III, C-IV, D-II

(D) A-III, B-IV, C-I, D-II

11. Identify the incorrect statement from the following:

- (A) The IUPAC name of the element with atomic number 107 is Unnilseptium.
 - (B) The oxidation state and covalency of Al in $[Al(H_2O)_6]^{3+}$ are 3 and 6 respectively.
 - (C) The largest and the smallest species among Mg , Mg^{2+} , Al and Al^{3+} are Al and Mg^{2+} respectively.
 - (D) The similarity in behaviour of Li with Mg is referred to as 'diagonal relationship'.
-

12. Given below is an expression for the rate constant of a first order reaction occurring at a certain temperature, T (K).

$$\ln k = 14.34 - \frac{1.25 \times 10^4}{T}$$

The energy of activation in kcal mol^{-1} for the reaction is:

(Given: k in s^{-1} , $R = 1.987 \text{ cal mol}^{-1} \text{ K}^{-1}$)

- (A) 14.34
 - (B) 18.63
 - (C) 24.84
 - (D) 12.42
-

13. Phenolphthalein is used as an indicator for the titration of sodium hydroxide solution against a standard solution of oxalic acid. The colour change that is observed at an alkaline pH close to the equivalence point during this titration is:

- (A) colourless to pink
 - (B) pinkish red to yellow
 - (C) pink to colourless
 - (D) yellow to pinkish red
-

14. Methane reacts with steam at 1273 K in the presence of nickel catalyst to form:

- (A) CO and H_2
 (B) CO_2 and H_2
 (C) CO and H_2O
 (D) CO_2 and H_2O

15. Match List I with List II regarding organic chemical transformations:

List-I		List-II	
A.	$H_3C-CH-CH_3 \xrightarrow{\text{OH}}$	I.	(i) oleum; (ii) NaOH, Δ ; (iii) H^+
B.	$CH_3COOH \rightarrow CH_3CH_2OH$	II.	(i) O_2 ; (ii) H_2O/H^+
C.	$CH_3CH_2CH_2OH \rightarrow$ $CH_3-\underset{\substack{ \\ OH}}{CH}-CH_3$	III.	(i) CH_3OH, H^+ ; (ii) H_2 , Catalyst
D.		IV.	(i) conc. H_2SO_4, Δ ; (ii) H^+/H_2O

- (A) A-I, B-III, C-IV, D-II
 (B) A-II, B-I, C-IV, D-III
 (C) A-III, B-II, C-IV, D-I
 (D) A-III, B-IV, C-II, D-I

16. The pair of molecules that are metamers among the following is:

- (A) $CH_3OCH_2CH_2CH_3$ and $CH_3CH_2OCH_2CH_3$
 (B) $CH_3CH_2CH_2CH_2CH_3$ and $(CH_3)_2CHCH_2CH_3$
 (C) $H_3C-C(=O)-CH_3$ and $H_3C-CH_2-C(=O)-H$
 (D) $CH_3CH_2CH_2OH$ and $CH_3-CH(OH)-CH_3$

17. Match List I with List II regarding coordination complexes and their isomerism types:

	List I (Complex)		List II (Type of isomerism)
A.	$[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$	I.	Optical
B.	$[\text{Co}(\text{en})_3]^{3+}$	II.	Solvate
C.	$[\text{Co}(\text{NH}_3)_5\text{NO}_2]\text{Cl}_2$	III.	Geometrical
D.	$[\text{Cr}(\text{H}_2\text{O})_6]\text{Cl}_3$	IV.	Linkage

- (A) A-II, B-IV, C-III, D-I
 (B) A-III, B-I, C-IV, D-II
 (C) A-I, B-III, C-II, D-IV
 (D) A-III, B-IV, C-I, D-II

18. The number of hydrogen atoms present in 5.4 g of urea is:

(Given: Molar mass of urea : 60 g mol^{-1} , $N_A = 6.022 \times 10^{23} \text{ particles mol}^{-1}$)

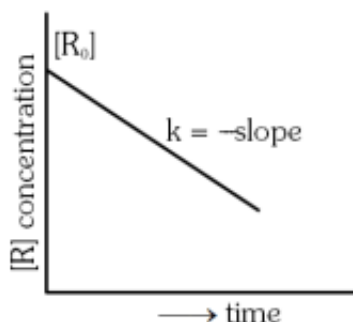
- (A) 2.168×10^{22}
 (B) 2.168×10^{23}
 (C) 1.084×10^{22}
 (D) 1.084×10^{23}

19. The calculated 'spin-only' magnetic moment of $\text{Ti}^{2+}(3d^2)$ is:

- (A) 3.87 BM
 (B) 5.92 BM
 (C) 4.90 BM
 (D) 2.84 BM

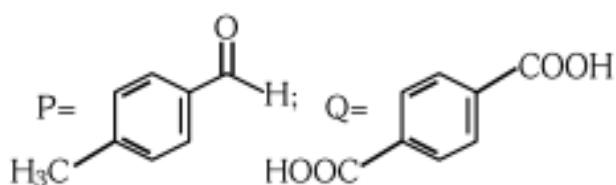
20. For a certain reaction $R \rightarrow \text{Product}$, the plot of concentration $[R]$ vs time has a negative

slope as shown. The order of reaction is:

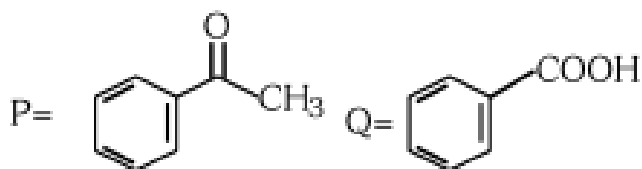


- (A) 1
- (B) 2
- (C) 2.5
- (D) 0

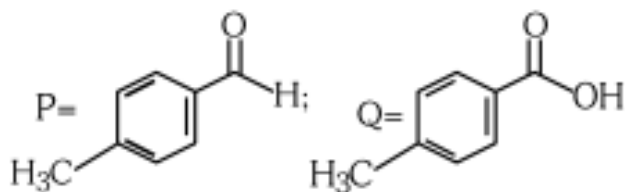
21. Compound $P(C_8H_8O)$ gives a red-orange precipitate with 2,4-DNP reagent and it does not reduce Fehling's reagent. On drastic oxidation with chromic acid, P gives an aromatic product Q which produces effervescence on treating with aqueous $NaHCO_3$. Compounds P and Q , respectively, are:



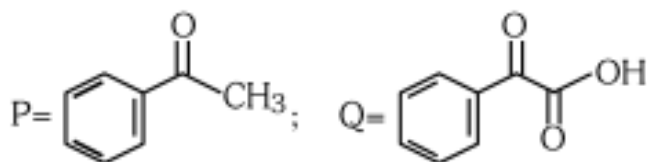
(A)



(B)



(C)



(D)

22. Match List I with List II regarding the order of reaction and the unit of the rate constant:

List-I Order of Reaction		List-II (Unit of rate constant)	
A.	Zero order	I.	$\text{mol}^{-1} \text{L s}^{-1}$
B.	First order	II.	$\text{mol}^2 \text{L}^2 \text{s}^{-1}$
C.	Second order	III.	s^{-1}
D.	Third order	IV.	$\text{mol L}^{-1} \text{s}^{-1}$

- (A) A-IV, B-III, C-II, D-I
 (B) A-IV, B-III, C-I, D-II
 (C) A-IV, B-II, C-I, D-III
 (D) A-I, B-II, C-III, D-IV

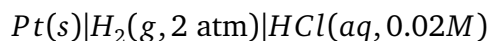
23. Although +3 oxidation state is most common in lanthanoids, cerium still shows +4 oxidation state because:

- (A) After losing one more electron, it acquires $4f^{14}$ electronic configuration.
 (B) Its atomic number is 61.
 (C) After losing one more electron, it acquires $4f^0$ electronic configuration.
 (D) Its nearest inert gas is Radon.

24. In a test tube containing a salt, a few drops of dilute H_2SO_4 was added, which gave colourless vapours having the smell of vinegar. The vapours turned blue litmus paper red. Identify the correct anion from the following:

- (A) Carbonate, CO_3^{2-}
(B) Sulphate, SO_4^{2-}
(C) Acetate, CH_3COO^-
(D) Sulphide, S^{2-}
-

25. Calculate emf of the half-cell given below:



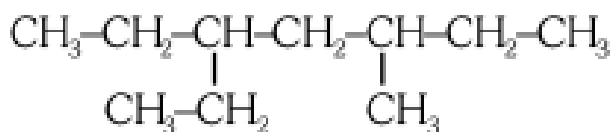
$$E_{\text{H}^+/\text{H}_2}^\circ = 0 \text{ V}, \frac{2.303RT}{F} = 0.059, \log 2 = 0.3010$$

- (A) 0.035 V
(B) -0.035 V
(C) -0.109 V
(D) 0.109 V
-

26. At 298 K, a certain buffer solution contains equal concentrations of X^- and HX . If K_b for X^- is 10^{-10} , what is the pH of this buffer solution?

- (A) 4
(B) 6
(C) 2
(D) 10
-

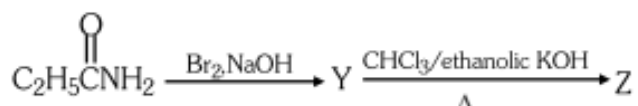
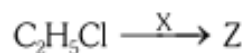
27. The correct IUPAC name of the following compound is:



- (A) 3-methyl-5-ethylhexane
(B) 3-ethyl-5-methylheptane
-

- (C) 3,5-diethylhexane
(D) 2,4-diethylhexane
-

28. The following two reactions give the same foul smelling product Z:



X and Z, respectively, are:

- (A) $X = \text{AgCN}$, $Z = \text{C}_2\text{H}_5\text{CN}$
(B) $X = \text{KCN}$, $Z = \text{C}_2\text{H}_5\text{CN}$
(C) $X = \text{KCN}$, $Z = \text{C}_2\text{H}_5\text{NC}$
(D) $X = \text{AgCN}$, $Z = \text{C}_2\text{H}_5\text{NC}$
-

29. Mixture of chloroform and acetone forms a solution with negative deviation from Raoult's law due to:

- (A) increase in escaping tendency of molecules of each component.
(B) repulsive forces.
(C) stronger intermolecular forces between chloroform molecules than those between chloroform and acetone molecules.
(D) formation of hydrogen bonding between acetone and chloroform.
-

30. Identify the correct statements:

- A. The molality of 2.5 g of ethanoic acid (Molar mass : 60 g mol^{-1}) in 75 g of benzene solution is 0.556 m.
B. The molarity of a solution containing 5 g of NaOH (molar mass : 40 g mol^{-1}) in 450 mL of solution is 0.278 M at 298 K.
C. Aquatic species are more comfortable in cold water.
-

D. The solubility of gas increases with decrease in pressure.

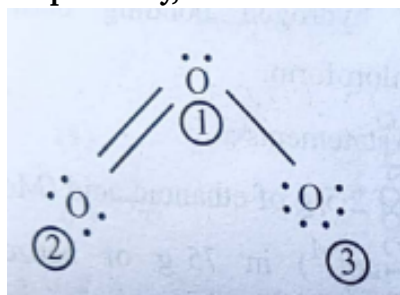
E. For a binary mixture of A and B, the number of moles are n_A and n_B respectively. The mole fraction of B will be $x_B = \frac{n_B}{n_A + n_B}$.

- (A) A and B only
- (B) A, D and E only
- (C) A, B and C only
- (D) A and C only

31. Identify the incorrect statement from the following:

- (A) ECl_3 , ($E = B$ and Al), is a monomer when $E = B$ and a dimer when $E = Al$.
- (B) The order of catenation property of Group 14 elements is $C \gg Si > Ge \approx Sn$.
- (C) Oxygen exhibits only -2 oxidation state.
- (D) Carbon has the ability to form $p\pi - p\pi$ multiple bond with itself.

32. The correct formal charges on oxygen atoms numbered 2, 1 and 3 in the ozone molecule, respectively, are:



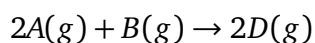
- (A) $-1, 0, +1$
- (B) $0, 0, 0$
- (C) $0, +1, -1$
- (D) $+1, 0, -1$

33. At a certain temperature K , during a process, 500 J is absorbed by the system and work of

200 J is done by the system. Then change in internal energy of the system is:

- (A) 500 J
- (B) 400 J
- (C) 300 J
- (D) 700 J

34. Consider the following reaction:



$$\Delta U^\circ = -10 \text{ kJ mol}^{-1} \text{ and } \Delta S^\circ = -44 \text{ J K}^{-1}\text{mol}^{-1}$$

at 298 K. Identify the correct option with ΔG° for the reaction and spontaneity of the reaction at 298 K.

$$(R = 8.31 \text{ J mol}^{-1}\text{K}^{-1})$$

- (A) $-0.63568 \text{ kJ mol}^{-1}$, spontaneous
- (B) $+0.63568 \text{ kJ mol}^{-1}$, non-spontaneous
- (C) $-1.635 \text{ kJ mol}^{-1}$, spontaneous
- (D) $+1.635 \text{ kJ mol}^{-1}$, non-spontaneous

35. Select the reagents that reduce nitriles to primary amines:

A. LiAlH_4 ; (ii) H_2O

B. $\text{Sn} + \text{HCl}$

C. H_2/Ni

D. $\text{Na(Hg)}/\text{C}_2\text{H}_5\text{OH}$

E. $\text{Br}_2/\text{aq. NaOH}$

- (A) A, C and D only
- (B) A, B and C only
- (C) B, D and E only
- (D) A, D and E only

36. Which one of the following is an ambidentate ligand?

- (A) Oxalate
- (B) Ethylenediaminetetraacetate ion
- (C) Thiocyanate
- (D) Ethane-1,2-diamine

37. A bulb is rated at 150 watt, converting 8% energy into light. If energy of one photon is 4.42×10^{-19} J, how many photons are emitted by the bulb per second?

- (A) 1.35×10^{19}
- (B) 2.71×10^{19}
- (C) 27.2×10^{19}
- (D) 4.06×10^{19}

38. Identify the incorrect statement from the following:

- (A) Nitrogen can form $p\pi - p\pi$ multiple bonds with itself.
- (B) $P(CH_3)_3$ and $As(CH_3)_3$ form $d\pi - d\pi$ bond with transition metals.
- (C) Nitrogen can form $d\pi - p\pi$ bond with oxygen.
- (D) Phosphorus, arsenic and antimony show catenation property.

39. The correct order of increasing metallic character of Na, Be, Mg, Si and P is:

- (A) $P < Si < Be < Mg < Na$
- (B) $Be < Si < P < Mg < Na$
- (C) $P < Mg < Na < Si < Be$
- (D) $P < Mg < Be < Si < Na$

40. In a qualitative analysis, Bi^{3+} is detected by appearance of precipitate of $\text{BiO}(\text{OH})$. Calculate pH when the following equilibrium exists at 298 K:



$K = 4 \times 10^{-10}$, Given: $\log 2 = 0.3010$

- (A) 4.699
(B) 9.301
(C) 5.286
(D) 8.714

41. Match List I with List II regarding molecules and their bonding features:

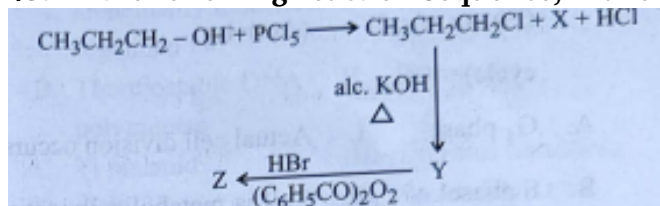
	List-I		List-II
(A)	C_2H_4	(I)	3σ bonds, 2π bonds
(B)	C_2H_2	(II)	3σ bonds one lone pair
(C)	CH_4	(III)	4σ bonds
(D)	NH_3	(IV)	5σ bonds, 1π bond

- (A) A-I, B-II, C-IV, D-III
(B) A-III, B-IV, C-II, D-I
(C) A-II, B-IV, C-I, D-III
(D) A-IV, B-I, C-III, D-II

42. Given below are the reactions. Identify the reaction for which $K_p < K_c$:

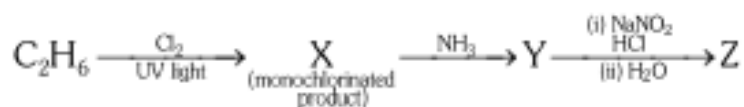
- (A) $\text{N}_2(g) + \text{O}_2(g) \rightleftharpoons 2\text{NO}(g)$
(B) $\text{H}_2\text{O}(g) + \text{CO}(g) \rightleftharpoons \text{H}_2(g) + \text{CO}_2(g)$
(C) $\text{H}_2(g) + \text{I}_2(g) \rightleftharpoons 2\text{HI}(g)$
(D) $\text{N}_2(g) + 3\text{H}_2(g) \rightleftharpoons 2\text{NH}_3(g)$

43. In the following reaction sequence, X and Z, respectively, are:



- (A) $\text{X} = \text{H}_3\text{PO}_3, \text{Z} = \text{CH}_3\text{CH}=\text{CH}_2$
(B) $\text{X} = \text{POCl}_3, \text{Z} = \text{CH}_3\text{CH}(\text{Br})\text{CH}_3$
(C) $\text{X} = \text{H}_3\text{PO}_3, \text{Z} = \text{CH}_3\text{CH}_2\text{CH}_2\text{Br}$
(D) $\text{X} = \text{POCl}_3, \text{Z} = \text{CH}_3\text{CH}_2\text{CH}_2\text{Br}$

44. The major product Z formed in the following sequence of reactions is:



- (A) $\text{C}_2\text{H}_5\text{NO}_2$
(B) $\text{C}_2\text{H}_5-\text{N}=\text{N}-\text{OH}$
(C) $\text{C}_2\text{H}_5\text{NH}_2$
(D) $\text{C}_2\text{H}_5\text{OH}$

45. When 1 dm^3 of CO_2 gas is passed over hot coke, the volume of gaseous mixture after complete reaction at STP becomes 1.4 dm^3 . The composition of the gaseous mixture at STP is:

- (A) 0.6 dm^3 of CO , 0.8 dm^3 of CO_2
(B) 0.6 dm^3 of CO , 0.9 dm^3 of CO_2
(C) 0.8 dm^3 of CO , 0.6 dm^3 of CO_2
(D) 0.8 dm^3 of CO , 0.7 dm^3 of CO_2

