

PREVIEW QUESTION BANK

Module Name : cec24-cy05 Coordination Chem states of matters and chemical kinetics-ENG
Exam Date : 18-May-2024 Batch : 15:00-18:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks												
Objective Question																
1	14362001	<p>The transition element with highest density is:</p> <ol style="list-style-type: none"> 1. Os 2. Fe 3. Zn 4. Ru <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00												
Objective Question																
2	14362002	<p>Match List-I with List-II</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>List-I</th> <th>List-II</th> </tr> </thead> <tbody> <tr> <td>(Transition metal ion.)</td> <td>(Spin only magnetic moment value in B.M.)</td> </tr> <tr> <td>(A). Cu(II)</td> <td>(I). 2.83</td> </tr> <tr> <td>(B). Ni(II)</td> <td>(II). 4.90</td> </tr> <tr> <td>(C). Zn(II)</td> <td>(III). 0.0</td> </tr> <tr> <td>(D). Mn(III)</td> <td>(IV). 1.73</td> </tr> </tbody> </table> <p>Choose the correct answer from the options given below:</p> <ol style="list-style-type: none"> 1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV) 2. (A) - (IV), (B) - (I), (C) - (III), (D) - (II) 3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III) 4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II) <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p>	List-I	List-II	(Transition metal ion.)	(Spin only magnetic moment value in B.M.)	(A). Cu(II)	(I). 2.83	(B). Ni(II)	(II). 4.90	(C). Zn(II)	(III). 0.0	(D). Mn(III)	(IV). 1.73	2.0	0.00
List-I	List-II															
(Transition metal ion.)	(Spin only magnetic moment value in B.M.)															
(A). Cu(II)	(I). 2.83															
(B). Ni(II)	(II). 4.90															
(C). Zn(II)	(III). 0.0															
(D). Mn(III)	(IV). 1.73															

A4 : 4

Objective Question

3	14362003	<p>Given below are two statements:</p> <p>Statement (I): The melting and boiling points of the transition elements are generally very high.</p> <p>Statement (II): Zn, Cd and Hg are exception, with very low melting and boiling point.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none">1. Both Statement (I) and Statement (II) are true.2. Both Statement (I) and Statement (II) are false.3. Statement (I) is true but Statement (II) is false.4. Statement (I) is false but Statement (II) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

4	14362004	<p>The transition element with highest melting point is:</p> <ol style="list-style-type: none">1. Ta2. W3. Re4. Ag <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

5	14362005		2.0	0.00
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Given below are two statements:

Statement (I): TiCl_3 used as the Ziegler-Natta catalyst in the production of polythene.

Statement (II): V_2O_5 converts SO_2 to SO_3 in the contact process for making H_2SO_4 .

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are true.
2. Both Statement (I) and Statement (II) are false.
3. Statement (I) is true but Statement (II) is false.
4. Statement (I) is false but Statement (II) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

6	14362006	<p>Given below are two statements:</p> <p>Statement (I): Fe is the fourth most abundant element by weight.</p> <p>Statement (II): Ti the ninth and Mn the twelfth most abundant element.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

7	14362007		2.0	0.00
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Given below are two statements:

Statement (I): Fe is the fourth most abundant element by weight.

Statement (II): According to Harkins' rule the element with an even atomic number are in general more abundant than their neighbours with odd atomic numbers.

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are true.
2. Both Statement (I) and Statement (II) are false.
3. Statement (I) is true but Statement (II) is false.
4. Statement (I) is false but Statement (II) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

8	14362008	<p>Which of the following are true for the transition metals and their compounds?</p> <p>(A). known for their catalytic activity</p> <p>(B). possess multiple oxidation states</p> <p>(C). are mostly coloured</p> <p>(D). form large number of complexes</p> <p>Choose the correct answer from the options given below:</p> <ol style="list-style-type: none"> 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (B), (C) and (D). 4. (B), (C) and (D) only. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

9	14362009	<p>Which among the following is NOT a lanthanonids?</p> <ol style="list-style-type: none"> 1. Nd 2. Sm 3. Dy 4. Am 	2.0	0.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

10	14362010	<p>The correct order of ligand in the order of increasing field strength is:</p> <p>(A). H₂O</p> <p>(B). CO</p> <p>(C). SCN⁻</p> <p>(D). I⁻</p> <p>Choose the correct answer from the options given below:</p> <p>1. (A) < (B) < (C) < (D).</p> <p>2. (D) < (C) < (A) < (B).</p> <p>3. (B) < (A) < (D) < (C).</p> <p>4. (C) < (B) < (D) < (A).</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

11	14362011	<p>Which among the following is NOT a structural isomerism?</p> <p>1. Solvate isomerism</p> <p>2. Optical isomerism</p> <p>3. Linkage isomerism</p> <p>4. Ionisation isomerism</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

12	14362012		2.0	0.00
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The IUPAC name of the red coloured complex $[\text{Fe}(\text{C}_4\text{H}_7\text{O}_2\text{N}_2)_2]$ obtained from the reaction of Fe^{2+} and dimethyl glyoxime is:

1. bis (dimethyl oxime) ferrate (II)
2. bis (dimethyl oxide) iron (II)
3. bis (2,3 butanediol dioximato) iron (II)
4. bis (dimethyl glyoximato) iron(II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

13 14362013

$\text{K}_2[\text{OsCl}_5\text{N}]$ is named as:

1. Potassium pentachloro azo osmate (VI)
2. Potassium pentachloro nitridoosmate (VI)
3. Potassium pentachloro azidoosmate (VI)
4. Potassium pentachloro nitronium osmate (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

2.0 0.00

Objective Question

14 14362014

The EAN of metal atoms in $\text{Fe}(\text{NO})_2(\text{CO})_2$ and $\text{Co}_2(\text{CO})_8$ respectively are:

1. 34, 35
2. 34, 36
3. 36; 36
4. 36, 35

A1 : 1

A2 : 2

A3 : 3

A4 : 4

2.0 0.00

Objective Question

15 14362015

2.0 0.00

Pick out the correct statement with respect to $[\text{Fe}(\text{CN})_6]^{4-}$

1. It is sp^2d^2 hybridised, tetrahedral
2. It is d^2sp^3 hybridised, octahedral
3. It is dsp^2 hybridised, square planar
4. It is sp^3d^2 hybridised octahedral

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

16 14362016

The CFSE for octahedral $[\text{CoCl}_6]^{4-}$ is $18,000 \text{ cm}^{-1}$. The CFSE for tetrahedral $[\text{CoCl}_4]^{2-}$ will be:

1. $18,000 \text{ cm}^{-1}$
2. $16,000 \text{ cm}^{-1}$
3. $8,000 \text{ cm}^{-1}$
4. $20,000 \text{ cm}^{-1}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

2.0 0.00

Objective Question

17 14362017

Primary and secondary valency of Pt in $[\text{Pt}(\text{en})_2\text{Cl}_2]$ are:

1. 4; 4
2. 4, 6
3. 6, 4
4. 2, 6

A1 : 1

A2 : 2

A3 : 3

A4 : 4

2.0 0.00

Objective Question

18 14362018

2.0 0.00

The number of donor sites in ethylene diamine, dimethyl glyoxime, triethylene tetraamine and EDTA are respectively:

1. 2; 2; 3 and 6
2. 2; 2; 4 and 6
3. 2; 2; 2 and 6
4. 2; 3; 2 and 6

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

19	14362019	Which of these statements about $[\text{Co}(\text{CN})_6]^{3-}$ is true?	2.0	0.00
		<ol style="list-style-type: none"> 1. It has 4 unpaired electron, high spin 2. No unpaired electron, high spin 3. No unpaired electron, low spin 4. 4 unpaired electron, low spin 		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

20	14362020	Which one of the following statements concerning lanthanides elements is false?	2.0	0.00
		<ol style="list-style-type: none"> 1. Lanthanides are separated from one another by ion-exchange method 2. Ionic radii of trivalent lanthanides steadily increases 3. All lanthanides are highly dense metals 4. Mostly characteristic oxidation state of lanthanide elements is +3 		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

21	14362021		2.0	0.00
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Out of $[\text{Fe}(\text{CN})_6]^{4-}$, $[\text{Ni}(\text{CN})_4]^{2-}$ and $[\text{Ni}(\text{CO})_4]$

1. all have identical geometry
2. all are paramagnetic
3. all are diamagnetic
4. $[\text{Fe}(\text{CN})_6]^{4-}$ is diamagnetic but $[\text{Ni}(\text{CN})_4]^{2-}$ and $[\text{Ni}(\text{CO})_4]$ are paramagnetic

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

22	14362022	<p>Select the element, which does not show +4 oxidation state:</p> <ol style="list-style-type: none"> 1. Ti 2. Zr 3. La 4. Pt <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

23	14362023	<p>Atomic size of gold is almost same as that of silver. It is due to _____.</p> <ol style="list-style-type: none"> 1. the same crystal structure of silver and gold 2. almost the same electropositive character of the two metals 3. transition metals contraction in a series 4. the effect of lanthanide contraction <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

24	14362024		2.0	0.00
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The actinoids exhibit more number of oxidation states in general than the lanthanoids. This is because

1. due to less energy difference between 6d and 5f
2. the 5f orbitals are more buried than the 4f orbitals
3. there is a similarity between 4f and 5f orbitals in their angular part of the wave function
4. the actinoids are more reactive than the lanthanoids

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

25 14362025

2.0 0.00

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : Zn, Cd, Hg are non-transition elements while Cu, Ag, Au are transition element.

Reason (R) : In Zn, Cd, Hg (n-1)d orbitals are completely filled in their atomic state whereas in Cu, Ag, Au they are incomplete.

In light of the above statements, choose the *correct* answer from the options given below.

1. Both (A) and (R) are true and (R) is the correct explanation of (A).
2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
3. (A) is true but (R) is false.
4. (A) is false but (R) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

26 14362026

2.0 0.00

At which pressure and temperature conditions the behaviour of a real gas is closest to that of an ideal gas

- (A). 15 atm and 200 K
- (B). 1 atm and 273 K
- (C). 0.5 atm and 500 K
- (D). 380 mmHg and 227 °C

Choose the **correct** answer from the options given below:

- 1. (C) and (D) only.
- 2. (A), (B) and (D) only.
- 3. (A), (B), (C) and (D).
- 4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

27	14362027	<p>The number of atoms per unit cell in face centred and body centred cubic cell are respectively:</p> <ul style="list-style-type: none"> 1. 4, 2 2. 4, 3 3. 4, 6 4. 2, 4 <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

28	14362028	<p>Gaseous and liquid forms of a substance are indistinguishable:</p> <ul style="list-style-type: none"> 1. above the triple point temperature and triple point pressure 2. above critical temperature and critical pressure 3. above the boiling point 4. below the isobestic point <p>A1 : 1</p> <p>A2 : 2</p>	2.0	0.00
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A3 : 3

A4 : 4

Objective Question

29	14362029	<p>If the pressure of a given mass of gas is reduced to half and temperature is doubled simultaneously, the volume will be</p> <ol style="list-style-type: none"> 1. same as before 2. twice as before 3. four times as before 4. one fourth as before <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

30	14362030	<p>Since the atomic weights of C, N and O are 12, 14 and 16u, respectively. Among the following pair, the pair that will diffuse at the same rate is:</p> <ol style="list-style-type: none"> 1. carbon dioxide and nitrous oxide 2. carbon dioxide and nitrogen peroxide 3. carbon dioxide and carbon monoxide 4. nitrous oxide and nitrogen peroxide <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

31	14362031	<p>The Miller index of crystal plane cutting through the crystal axes at (2a, 3b, c) is:</p> <ol style="list-style-type: none"> 1. (2, 3, 1) 2. (1, 2, 2) 3. (4, 6, 2) 4. (3, 2, 6) <p>A1 : 1</p> <p>A2 : 2</p>	2.0	0.00
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A3 : 3

A4 : 4

Objective Question

32	14362032	<p>At constant temperature, the pressure of the gas is reduced to one third, the volume _____</p> <ol style="list-style-type: none"> 1. reduces to one third 2. increases by three times 3. remains the same 4. cannot be predicted <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

33	14362033	<p>The rate constant of a reaction depends upon</p> <ol style="list-style-type: none"> 1. temperature of the reaction 2. extent of the reaction 3. initial concentration of the reactants 4. the time of completion of reaction <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

34	14362034	<p>The rate of a gaseous reaction is given by the expression $k[A]^2[B]^3$. The volume of the reaction vessel is reduced to one half of the initial volume. What will be the reaction rate as compared to the original rate 'a'?</p> <ol style="list-style-type: none"> 1. $1/8a$ 2. $1/2a$ 3. $2a$ 4. $32a$ <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p>	2.0	0.00
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A4 : 4

Objective Question

35	14362035	<p>The overall rate of a reaction is governed by</p> <ol style="list-style-type: none">1. the rate of fastest intermediate step2. the sum of the rates of all intermediate steps3. the average of the rates of all the intermediate steps4. the rate of slowest intermediate step <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

36	14362036	<p>A first order reaction takes 40 min for 30% decomposition. What will be $t_{1/2}$?</p> <ol style="list-style-type: none">1. 77.7 min2. 52.5 min3. 46.2 min4. 22.7 min <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

37	14362037	<p>The activation energy in a chemical reaction is defined as</p> <ol style="list-style-type: none">1. the difference in energies of reactants and products2. the sum of energies of reactants and products3. the difference in energy of intermediate complex with the average energy of reactants.4. the difference in energy of intermediate complex and the average energy of reactants <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question				
38	14362038	<p>The increase in concentration of the reactants lead to change in</p> <ol style="list-style-type: none">1. ΔH2. collision frequency3. activation energy4. equilibrium constant <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
Objective Question				
39	14362039	<p>For a first order reaction, the ratio of the time taken for $7/8^{\text{th}}$ of the reaction to complete to that of half of the reaction to complete is</p> <ol style="list-style-type: none">1. 3 : 12. 1 : 33. 2 : 34. 3 : 2 <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
Objective Question				
40	14362040	<p>Activation energy of a chemical reaction can be determined by_____.</p> <ol style="list-style-type: none">1. determining the rate constant at standard temperature2. determining the rate constatnt at two temperatures3. determining probability of collision4. using catalyst <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00

Objective Question				
41	14362041	<p>Which of the following statements is not correct for the catalyst?</p> <ol style="list-style-type: none">1. It catalyses the forward and backward reaction to the same extent2. It alters ΔG of the reaction3. It is a substance that does not change the equilibrium constant of a reaction4. It provides an alternate mechanism by reducing activation energy between reactants and products. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
Objective Question				
42	14362042	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : Order of a reaction with respect to any reactant can be zero, positive, negative or fractional</p> <p>Reason (R) : Rate of a reaction cannot decrease with increase in concentration of a reactant or a product</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none">1. Both (A) and (R) are true and (R) is the correct explanation of (A).2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).3. (A) is true but (R) is false.4. (A) is false but (R) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
Objective Question				
43	14362043	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : The rate of a reaction sometimes does not depend on concentrations</p> <p>Reason (R) : Lower the activation energy, faster is the reaction</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none">1. Both (A) and (R) are true and (R) is the correct explanation of (A).2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).3. (A) is true but (R) is false.4. (A) is false but (R) is true. <p>A1 : 1</p>	2.0	0.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

44	14362044	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : E_a of the forward reaction is higher than that of backward reaction in a reversible endothermic reaction</p> <p>Reason (R) : Increasing the temperature of the substance increases the fraction of molecules which collide with energies greater than E_a.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none"> Both (A) and (R) are true and (R) is the correct explanation of (A). Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is true but (R) is false. (A) is false but (R) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

45	14362045	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : All the gases should be cooled below their critical temperature for liquification.</p> <p>Reason (R) : Cooling slows down the movement of molecules therefore, intermolecular forces may hold the slowly moving molecules together and the gas liquifies.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none"> Both (A) and (R) are true and (R) is the correct explanation of (A). Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is true but (R) is false. (A) is false but (R) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

46	14362046	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : Viscosity of liquids decreases as the temperature rises</p> <p>Reason (R) : At high temperature , molecules have high kinetic energy and can overcome the intermolecular forces to flow faster.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none">Both (A) and (R) are true and (R) is the correct explanation of (A).Both (A) and (R) are true but (R) is NOT the correct explanation of (A).(A) is true but (R) is false.(A) is false but (R) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

47	14362047	<p>The rate law for a reaction, $A + B \rightarrow C + D$ is given by the expression $k[A]$. The rate of reaction will be</p> <ol style="list-style-type: none">doubled on doubling the concentration of Bhalved on reducing the concentration of A to halfdecreased on increasing the temperature of the reactionunaffected by any change in concentration or temperature. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	2.0	0.00
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Objective Question

48	14362048	<p>For the reaction $H_{2(g)} + Br_{2(g)} \rightarrow 2HBr_{(g)}$, the reaction rate = $k[H_2][Br_2]^{1/2}$. Which statement is true about this reaction?</p> <ol style="list-style-type: none">The reaction is of second orderMolecularity of the reaction is 3/2The unit of k is sec^{-1}Molecularity of the reaction is 2. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p>	2.0	0.00
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A4 : 4

Objective Question

49 14362049

2.0 0.00

Which of the following are correct statements?

- (A). Van der waals constant 'a' is a measure of attractive force
- (B). Van der waals constant 'b' is also called co-volume or excluded volume
- (C). 'b' is expressed in L mol^{-1}
- (D). 'b' is one third of critical volume

Choose the **correct** answer from the options given below:

1. (A), (B) and (D) only.
2. (A), (B) and (C) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

50 14362050

2.0 0.00

When a gas is expanded at constant temperature

- (A). The pressure decreases
- (B). The kinetic energy of the molecules remains the same
- (C). The kinetic energy of the molecules decreases
- (D). The number of molecules of the gas decreases

Choose the **correct** answer from the options given below:

1. (A), and (B) only.
2. (A), (B) and (D) only.
3. (A), (B), (C) and (D).
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4