# National Testing Agency

Coordination Chemistry States of Matter **Question Paper Name:** and Chemical Kinetics 29th August 2021 Shift 2 Coordination Chemistry States of Matter **Subject Name:** and Chemical Kinetics **Creation Date:** 2021-08-29 19:53:31 **Duration:** 180 **Total Marks:** 100

# **Coordination Chemistry States of Matter and Chemical Kinetics**

Yes

94091886 **Group Id: Group Maximum Duration:** 0 **Group Minimum Duration:** 120 **Show Attended Group?:** No **Edit Attended Group?:** No Break time: 0 **Group Marks:** 100 Is this Group for Examiner?:

**Display Marks:** 

**Group Number:** 

**Coordination Chemistry States of Matter and Chemical** 

No

# **Kinetics-1**

Section Id :	940918124
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	940918170
Question Shuffling Allowed :	Yes
Question Number: 1 Question Id: 9409185708 Question Mandatory: No Correct Marks: 1 Wrong Marks: 0 To which of the following series the transition elements fr	
<ol> <li>3d series</li> <li>4d series</li> <li>5d series</li> <li>6 d series</li> </ol>	
Options :	
94091821445. 1	
94091821446. 2	
94091821447. 3	
94091821448. 4	

Question Number: 2 Question Id: 9409185709 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

# Which pair of ions is colourless?

1. Mn<sup>3+,</sup> Co<sup>3+</sup>

2. Fe<sup>3+,</sup> Cr<sup>3+</sup>

3. Zn<sup>2+</sup>, Sc<sup>3+</sup>

4. Ti<sup>2+,</sup> Cu<sup>2+</sup>

# **Options:**

94091821449.1

94091821450.2

94091821451.3

94091821452.4

Question Number: 3 Question Id: 9409185710 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

**Correct Marks: 1 Wrong Marks: 0** 

The higher oxidation states of transition elements are found to be the combination with A and B, which are:

1. F, O

2. O, N

3. O, Cl

4. F, Cl

# **Options:**

94091821453.1

94091821454. 2

94091821455.3

94091821456.4

Question Number: 4 Question Id: 9409185711 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Magnetic moment of  $X^{n+}$  is  $\sqrt{24}$  B.M. Hence number of unpaired electron and value of 'n' respectively, (Atomic number = 26)

- 1.4.3
- 2.3,5
- 3. 4, 2
- 4. 4, 1

# **Options:**

94091821457.1

94091821458. 2

94091821459.3

94091821460.4

Question Number: 5 Question Id: 9409185712 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Compared to Cu<sup>2+</sup> having 3d<sup>9</sup> configuration, Cu<sup>+</sup> having 3d<sup>10</sup> configuration (aqueous solution)

- 1. is more stable
- 2. Is equally stable
- 3. Is less stable
- 4. Stability depends upon nature of copper salt

#### **Options:**

94091821461.1

94091821462.2

94091821463.3

94091821464.4

Question Number: 6 Question Id: 9409185713 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

The basic character of transition metal monoxides follows the order:\_\_\_\_\_

1. TiO > FeO > VO > CrO

2. TiO > VO > CrO > FeO

3. VO > CrO > TiO > FeO

4. CrO > VO > FeO > TiO

# **Options:**

94091821465.1

94091821466.2

94091821467.3

94091821468.4

Question Number: 7 Question Id: 9409185714 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Atomic size of gold is almost same as that of silver. It is due to :\_\_\_\_\_

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

#### **Options:**

94091821469.1

94091821470. 2

94091821471.3

94091821472.4

Question Number: 8 Question Id: 9409185715 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Which of the following statement regarding interstitial compounds is incorrect-

- 1. They are chemically inert
- 2. They are soft and nonconductive
- 3. They retain metallic conductivity
- 4. They have high melting point

# **Options:** 94091821473.1 94091821474. 2 94091821475.3 94091821476.4 Question Number: 9 Question Id: 9409185716 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 Select the element in the following which does not show +4 oxidation state . 1. Ti 2. Zr 3. La 4. Pt **Options:** 94091821477.1 94091821478. 2 94091821479.3 94091821480.4 Question Number: 10 Question Id: 9409185717 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 Cerium can show the oxidation state of +4 because :\_\_\_\_\_ 1. It resemble alkali metals 2. It has very low value of Ionization Energy 3. of its tendency to attain noble gas configuration of xenon 4. of its tendency to attain 4f 7 configuration **Options:** 94091821481.1 94091821482. 2

94091821483.3

Question Number : 11 Question Id : 9409185718 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
The maximum oxidation state shown by actinides is :
1. + 6 2. + 7 3. + 5 4. + 4
Options :
94091821485. 1
94091821486. 2
94091821487. 3
94091821488. 4
Question Number : 12 Question Id : 9409185719 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
The outer electronic configuration of gadolinium (at no 64) is:
1. 4f <sup>7</sup> 5d <sup>1</sup> 6s <sup>2</sup> 2. 4f <sup>8</sup> 5d <sup>0</sup> 6s <sup>2</sup> 3. 4f <sup>8</sup> 5d <sup>1</sup> 6s <sup>1</sup> 4. 4f <sup>7</sup> 5d <sup>0</sup> 6s <sup>2</sup>
Options :
94091821489. 1
94091821490. 2

Question Number : 13 Question Id : 9409185720 Question Type : MCQ Option Shuffling : No Is

**Question Mandatory : No** 

94091821491.3

94091821492.4

# Correct Marks: 1 Wrong Marks: 0

An increase in both atomic and ionic radii with atomic number occurs in any group of the periodic table. In accordance of this the ionic radii of Ti(IV) and Zr(IV) ions are 0.68 and 0.74 Angstrom, respectively but for Hf(IV) ion the ionic radius is 0.75 Angstrom which is almost the same as that for Zr(IV) ion. This is due to:

- 1. greater degree of covalency in compounds of Hf(IV)
- 2. Lanthanide contraction
- 3. Difference in the co-ordination number of Zr(IV) and Hf(IV) in their compounds
- 4. Actinide contraction

# **Options:**

94091821493.1

94091821494. 2

94091821495.3

94091821496.4

Question Number: 14 Question Id: 9409185721 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Which one of the following ions is the most stable in aqueous solution

- 1. V3+
- 2. Ti3+
- 3. Mn<sup>3+</sup>
- 4. Cr3+

#### **Options:**

94091821497.1

94091821498. 2

94091821499.3

94091821500.4

Question Number: 15 Question Id: 9409185722 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Identify the incorrect statement among the following:

- 1. Lanthanoid contraction is accumulation of successive shrinkages
- As a result of lanthanoid contraction, the properties of 4d series of the transition elements have no similarities with the 5d series of elements.
- 3. Shielding power of 4f electrons is quite weak.
- 4. there is a decrease in the radii of the atoms or ions as one proceeds from La to Lu.

# **Options:**

94091821501.1

94091821502. 2

94091821503.3

94091821504.4

Question Number: 16 Question Id: 9409185723 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

For the four successive transition elements (Cr, Mn,Fe and Co), the stability of +2 oxidation state in gaseous state will be there in which of the following order?

- 1. Mn > Fe > Cr > Co
- 2. Fe > Mn > Co > Cr
- 3. Co > Mn > Fe > Cr
- 4. Cr > Mn > Co > Fe

#### **Options:**

94091821505.1

94091821506.2

94091821507.3

94091821508.4

Question Number: 17 Question Id: 9409185724 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Among the following series of transition metal ions, the one where all metal ions have 3d<sup>2</sup> electronic configuration is: \_\_\_\_\_

# **Options:**

94091821509.1

94091821510.2

94091821511.3

94091821512.4

Question Number: 18 Question Id: 9409185725 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Identify the incorrect statement among the following:

- 1. 4f and 5f orbitals are equally shielded.
- 2. d-block elements show irregular and erratic chemical properties among themselves.
- 3. La and Lu have partially filled d-orbitals and no other partially filled orbitals.
- 4. The chemistry of various lanthanoids is very similar.

# **Options:**

94091821513.1

94091821514. 2

94091821515.3

94091821516.4

Question Number: 19 Question Id: 9409185726 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

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

# **Options:**

94091821517.1

94091821518. 2

94091821519.3

94091821520.4

Question Number: 20 Question Id: 9409185727 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Similar sizes of second and third transition elements can be explained on the basis of:\_\_\_\_\_

- 1. Inert-pair effect
- 2. Screening effect
- 3. Lanthanide contraction
- 4. Increasing effective nuclear charge

# **Options:**

94091821521.1

94091821522. 2

94091821523.3

94091821524.4

Question Number: 21 Question Id: 9409185728 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

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

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

- 1. both Assertion and Reason are True & the Reason is correct explanation of Assertion.
- both Assertion & Reason are True & the Reason is not a correct explanation of the Assertion.
- 3. Assertion is True but the Reason is False.
- 4. both Assertion and Reason are False.

#### **Options:**

94091821525.1

94091821526, 2

94091821527.3

94091821528.4

Question Number: 22 Question Id: 9409185729 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Assertion: KMnO<sub>4</sub> is dark pink coloured compound.

Reason: In KMnO<sub>4</sub>, charge transfer occurs.

- 1. both Assertion and Reason are True & the Reason is correct explanation of Assertion.
- both Assertion & Reason are True & the Reason is not a correct explanation of the Assertion.
- 3. Assertion is True but the Reason is False.
- 4. both Assertion and Reason are False.

#### **Options:**

94091821529.1

94091821530.2

94091821531.3

94091821532.4

Question Number: 23 Question Id: 9409185730 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

# Correct Marks: 1 Wrong Marks: 0

Assertion: Melting point of Mn less than that of Fe.

Reason: Mn has less number of unpaired electrons than Fe in atomic state.

- 1. both Assertion and Reason are True & the Reason is correct explanation of Assertion.
- both Assertion & Reason are True & the Reason is not a correct explanation of the Assertion.
- 3. Assertion is True but the Reason is False.
- 4. both Assertion and Reason are False.

# **Options:**

94091821533.1

94091821534.2

94091821535.3

94091821536.4

Question Number: 24 Question Id: 9409185731 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Assertion: Neptunium is transuranic element.

Reason: It is heavier than uranium.

- 1. both Assertion and Reason are True & the Reason is correct explanation of Assertion.
- both Assertion & Reason are True & the Reason is not a correct explanation of the Assertion.
- 3. Assertion is True but the Reason is False.
- 4. both Assertion and Reason are False.

#### **Options:**

94091821537.1

94091821538.2

94091821539.3

94091821540.4

Question Number: 25 Question Id: 9409185732 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

# Correct Marks: 1 Wrong Marks: 0

The coordination number and oxidation number of the central metal ion in the complex  $[Pt(en)_2]^{2+}$  is:\_\_\_\_\_

1.2, +2

2.6, +4

3.4, +4

4. 4, +2

# **Options:**

94091821541.1

94091821542. 2

94091821543.3

94091821544.4

Question Number: 26 Question Id: 9409185733 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Hemoglobin and chlorophyll contain respectively

1. Fe, Co

2. Fe. Mn

3. Mg, Fe

4. Fe, Mg

# **Options:**

94091821545.1

94091821546. 2

94091821547.3

94091821548.4

Question Number: 27 Question Id: 9409185734 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Paramagnetism is given by the relation $\mu = 2\sqrt{s}(S+1)$ magnetons where 's' is the total spin. On this basis, the paramagnetism of Cu <sup>+</sup> ion is
1. 3.88 magnetons 2. 2.83 magnetons 3. 1.41 magnetons 4. zero
Options :
94091821549. 1
94091821550. 2
94091821551. 3
94091821552. 4
Question Number : 28 Question Id : 9409185735 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
Maximum magnetic moment is shown by
1. d <sup>5</sup> 2. d <sup>6</sup> 3. d <sup>7</sup> 4. d <sup>8</sup>
Options :
94091821553. 1
94091821554. 2
94091821555. 3
94091821556. 4

Question Number : 29 Question Id : 9409185736 Question Type : MCQ Option Shuffling : No Is

**Question Mandatory : No** 

Which of the following set of elements do not show the properties, characteristic of d-block elements?

1. Cu, Aq, Au

2. Zn, Cd, Hg

3. Sc, Ti, V

4. Fe, Co, Ni

# **Options:**

94091821557.1

94091821558.2

94091821559.3

94091821560.4

Question Number: 30 Question Id: 9409185737 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

**Correct Marks: 1 Wrong Marks: 0** 

MnO<sup>4-</sup> is of intense pink colour, though Mn is in (+7) oxidation state. It is due to

- 1. oxygen gives colour to it
- 2. charge transfer when Mn gives its electron to oxygen
- 3. charge transfer when oxygen gives its electron to Mn making Mn(+VI) hence, coloured
- 4. due to d-d transition

# **Options:**

94091821561.1

94091821562.2

94091821563.3

94091821564.4

Question Number: 31 Question Id: 9409185738 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

#### Select the incorrect statement

- 1. Ionisation energies of 5d-elements are greater than those of 3d and 4d elements
- 2. Cu(I) is diamagnetic while Cu(II) is paramagnetic
- 3.  $[Ti(H_2O)_6]^{3+}$  is coloured while  $[Sc(H_2O)_6]^{3+}$  is colourless
- 4. Transition elements cannot form complexes

# **Options:**

94091821565.1

94091821566.2

94091821567.3

94091821568.4

Question Number: 32 Question Id: 9409185739 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The element Os lies in

1. s-block

2. p-block

3. d-block

4. f-block

# **Options:**

94091821569.1

94091821570.2

94091821571.3

94091821572.4

Question Number: 33 Question Id: 9409185740 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Question Number: 34 Question Id: 9409185741 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Which of the following statements is not correct?

- 1. La(OH)3 is less basic than Lu(OH)3
- 2. In lanthanide series ionic radius of Ln3+ ion decreases
- 3. La is actually an element of transition series rather lanthanide
- 4. Atomic radius of Zr and Hf are same because of lanthanide contraction

# **Options:**

94091821577.1

94091821578.2

94091821579.3

94091821580.4

Question Number: 35 Question Id: 9409185742 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Which one of the following elements shows maximum number of different oxidation states in its compounds? 1. Eu 2. La 3. Gd 4. Am **Options:** 94091821581.1 94091821582. 2 94091821583.3 94091821584.4 Question Number: 36 Question Id: 9409185743 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No Correct Marks: 1 Wrong Marks: 0** The pair of compounds having metals in their highest oxidation states is\_\_\_\_\_\_ 1. MnO<sub>2</sub>, FeCl<sub>3</sub> 2. [MnO<sub>4</sub>]<sup>-</sup>, CrO<sub>2</sub>Cl<sub>2</sub> 3. [Fe(CN)<sub>6</sub>]<sup>3-</sup>, [Co(CN)<sub>3</sub>] 4. [NiCl<sub>4</sub>]<sup>2-</sup>, [CoCl<sub>4</sub>]

# **Options:**

94091821585.1

94091821586. 2

94091821587. 3

94091821588.4

Question Number: 37 Question Id: 9409185744 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Most transition metals
I. forms sets of compounds which display different oxidation states of the metal.
II. form coloured ions in solution
III burn vigorously in oxygen
IV replace H <sub>2</sub> from dilute acids
Of these
1. I, II, III are correct 2. II, III, IV are correct 3. I, II are correct 4. I, II, III and IV are correct
Options:
94091821589. 1
94091821590. 2
94091821591. 3
94091821592. 4
Question Number : 38 Question Id : 9409185745 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
Effective atomic number (EAN) of Fe in brown ring complex [Fe(H <sub>2</sub> O) <sub>5</sub> NO] <sup>2+</sup> 1. 36 2. 37 3. 38 4. 39
Options :
94091821593. 1
94091821594. 2
94091821595. 3
94091821596. 4

Question Number : 39 Question Id : 9409185746 Question Type : MCQ Option Shuffling : No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The transition elements are not characterized by\_\_\_\_\_

- 1. tendency to form complexes
- 2. ability to have several oxidation sates
- 3. greater reactivity from left to right in period
- 4. tendency to form coloured compounds

# **Options:**

94091821597.1

94091821598.2

94091821599.3

94091821600.4

Question Number: 40 Question Id: 9409185747 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The paramagnetism of transition element compounds is due to\_\_\_\_\_

- 1. paired electrons spinning in opposite directions
- 2. unpaired electrons in d and f-orbitals
- 3. shared valance electrons
- 4. unpaired electrons in s or p-orbitals

#### **Options:**

94091821601.1

94091821602.2

94091821603.3

94091821604.4

Question Number: 41 Question Id: 9409185748 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Given  $E^{\circ}_{Au3+/Au} = 1.52 \text{ V}$  and  $E^{\circ}_{Au3+/Au+} = 1.36 \text{ V}$ . Point out the correct statement of the following

- 1. Au<sup>3+</sup> disproportionate into Au<sup>4+</sup> and Au<sup>2+</sup> in aqueous solution
- 2. Au<sup>3+</sup> disproportionate into Au<sup>4+</sup> and Au<sup>+</sup> in aqueous solution
- 3. Au<sup>+</sup> disproportionate into Au<sup>3+</sup> and Au in aqueous solution
- 4. Au<sup>+</sup> disproportionate into Au<sup>2+</sup> and Au in aqueous solution

#### **Options:**

94091821605.1

94091821606.2

94091821607.3

94091821608.4

Question Number: 42 Question Id: 9409185749 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The IUPAC name of the red coloured complex  $[Fe(C_4H_7O_2N_2)_2]$  obtained from the reaction of  $Fe^{2+}$  and dimethyl glyoxime\_\_\_\_\_

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

#### **Options:**

94091821609.1

94091821610.2

94091821611.3

94091821612.4

Question Number: 43 Question Id: 9409185750 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

K<sub>2</sub>[OsCl<sub>5</sub>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) **Options:** 94091821613.1 94091821614. 2 94091821615.3 94091821616.4 Question Number: 44 Question Id: 9409185751 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 The geometry of Ni(CO)<sub>4</sub> and [Ni(PPh<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>] are\_\_\_\_\_ 1. both square planar 2. tetrahedral and square planar 3. both tetrahedral 4. square planar and tetrahedral **Options:** 94091821617.1 94091821618.2 94091821619.3 94091821620.4 Question Number: 45 Question Id: 9409185752 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0

Which of the following is non-conducting?

- 1. CoCl<sub>3</sub>.6NH<sub>3</sub>
- 2. CoCl<sub>3</sub>.5NH<sub>3</sub>
- 3. CoCl<sub>3</sub>.4NH<sub>3</sub>
- 4. CoCl<sub>3</sub>.3NH<sub>3</sub>

# **Options:**

94091821621.1

94091821622. 2

94091821623.3

94091821624.4

Question Number: 46 Question Id: 9409185753 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Which of the following statement is correct?

- 1. Geometrical isomerism is not observed in complexes of CN 4 having tetrahedral geometry
- 2. Square planar complexes generally do not show geometrical isomerism
- 3. The square planar complex of general formulae Ma<sub>3</sub>b or Mab<sub>3</sub> exhibits cis-trans isomerism
- 4. The plantinum glycinato complex, [Pt(Gly)2] does not show geometrical isomerism

# **Options:**

94091821625.1

94091821626. 2

94091821627.3

94091821628.4

Question Number: 47 Question Id: 9409185754 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The number of geometrical isomers for octahedral  $[Co(NH_3)_2Cl_4]^-$ , square planar  $AuCl_2Br_2^-$  and  $[Co(NO_2)(NH_3)_5]^{2+}$  are\_\_\_\_\_

- 1, 2, 2, 2
- 2, 2, 2, no isomerism
- 3. 3,2,2
- 4. 2,3, no isomerism

#### **Options:**

94091821629.1

94091821630.2

94091821632.4

Question Number: 48 Question Id: 9409185755 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

**Correct Marks: 1 Wrong Marks: 0** 

The EAN of metal atoms in Fe(NO)<sub>2</sub>(CO)<sub>2</sub> and Co<sub>2</sub>(CO)<sub>8</sub> respectively are\_\_\_\_\_

- 1. 34, 35
- 2.34,36
- 3, 36, 36
- 4. 36, 35

# **Options:**

94091821633.1

94091821634.2

94091821635.3

94091821636.4

Question Number: 49 Question Id: 9409185756 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Select the complex that involves outer orbital hybridization of certain metal ion

- 1. [V(NH<sub>3</sub>)<sub>6</sub>]<sup>3+</sup>
- 2.  $[Zn(NH_3)_6]^{2+}$
- 3. [Cr(NH<sub>3</sub>)<sub>6</sub>]<sup>3+</sup>
- 4. [Co(NH<sub>3</sub>)<sub>6</sub>]<sup>3+</sup>

#### **Options:**

94091821637.1

94091821638.2

94091821639.3

94091821640.4

Question Number: 50 Question Id: 9409185757 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 Which is not a  $\pi$ -acceptor ligand? 1. l<sub>3</sub>-2. NO+ 3. (CH<sub>3</sub>)P 4. CN<sup>-</sup> **Options:** 94091821641.1 94091821642. 2 94091821643.3 94091821644.4 Question Number: 51 Question Id: 9409185758 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 According to Boyle's law the volume of a fixed mass of a gas, at constant temperature, is\_\_\_\_\_ 1. directly proportional to its pressure 2. inversely proportional to its pressure 3. the square root of its pressure 4. none of these **Options:** 

94091821645.1

94091821646. 2

94091821647.3

94091821648.4

Question Number: 52 Question Id: 9409185759 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

At constant temperature, the pressure of the gas is reduced to one third, the volume\_\_\_\_\_

- 1. reduces to one third
- 2. increases by three times
- 3. remains the same
- 4. cannot be predicted

# **Options:**

94091821649.1

94091821650.2

94091821651.3

94091821652.4

Question Number: 53 Question Id: 9409185760 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Which of the following is the correct mathematical relation for Charle's law at constant pressure?

- 1. V ∝ T
- 2. V ∝ t
- 3. V = kt
- 4. none of these

# **Options:**

94091821653.1

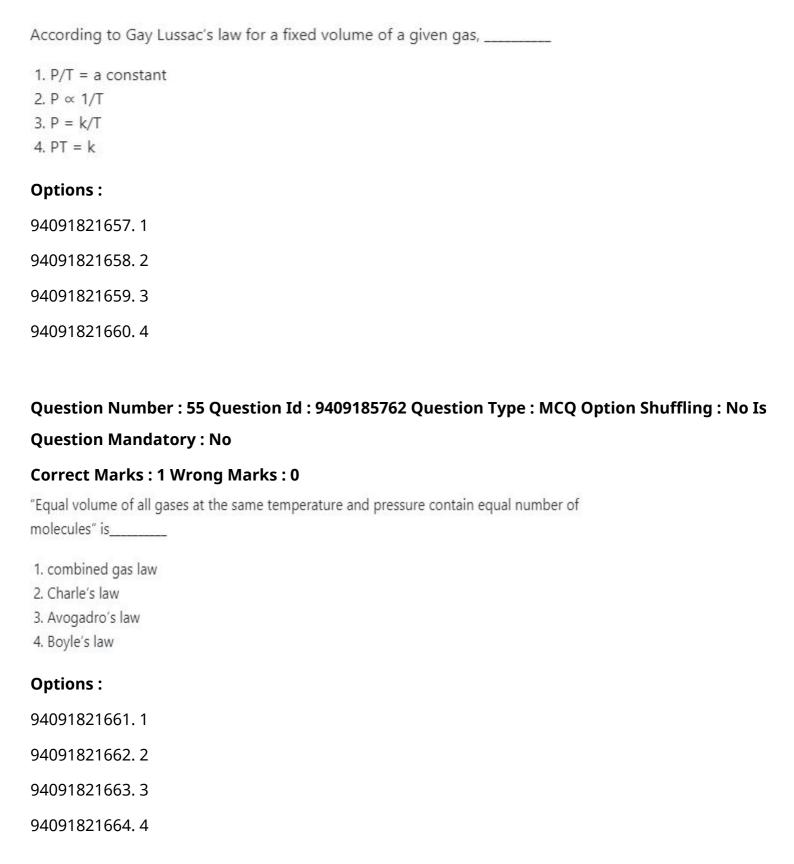
94091821654.2

94091821655.3

94091821656.4

Question Number: 54 Question Id: 9409185761 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 



Question Number : 56 Question Id : 9409185763 Question Type : MCQ Option Shuffling : No Is

**Question Mandatory: No** 

In lit atm K<sup>-1</sup> mol<sup>-1</sup> the numerical value of R, the gas constant, is\_\_\_\_\_\_ 1.0.821 2. 0.0821 3. 0.00821 4. 0.000821 **Options:** 94091821665.1 94091821666.2 94091821667.3 94091821668.4 Question Number: 57 Question Id: 9409185764 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No Correct Marks: 1 Wrong Marks: 0** Under same conditions of temperature and pressure, the rates of diffusion of different gases 1. directly proportional to the square roots of the molecular masses 2. directly proportional to the square roots of their vapour densities 3. inversely proportional to the square roots of their molecular masses 4. inversely proportional to the square roots of their molar volumes **Options:** 94091821669.1

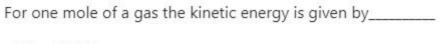
94091821670.2

94091821671.3

94091821672.4

Question Number: 58 Question Id: 9409185765 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 



1. E = 1/2 RT

2. E = 3/2 RT

3. E = 5/2 RT

4. E = 7/2 RT

# **Options:**

94091821673.1

94091821674. 2

94091821675.3

94091821676.4

Question Number: 59 Question Id: 9409185766 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The kinetic gas equation is given by the given relation ( where  $\mu$ = root mean square velocity, N= number of molecules and m= mass of a molecule)

1. PV = 1/3 m N  $\mu^2$ 

2. PV =  $1/2 \text{ m N } \mu^2$ 

3. PV = 3/2 m N  $\mu^2$ 

4. PV = 2/3 m N  $\mu^2$ 

# Options:

94091821677.1

94091821678.2

94091821679.3

94091821680.4

Question Number: 60 Question Id: 9409185767 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

The compressibility factor, z, i.e. the extent to which a real gas deviates from ideal behaviour is given by\_\_\_\_\_

$$1. Z = \frac{PV}{RT^2}$$

$$2. Z = \frac{PV}{RT^2}$$

$$3. Z = \frac{PV}{RT^2}$$

$$4. Z = \frac{PV}{RT^2}$$

# **Options:**

94091821681.1

94091821682. 2

94091821683.3

94091821684.4

Question Number : 61 Question Id : 9409185768 Question Type : MCQ Option Shuffling : No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The real gases show nearly ideal behaviour at\_\_\_\_\_

1. low pressures and low temperatures

- 2. high pressures and low temperatures
- 3. high pressures and high temperatures
- 4. low pressures and high temperatures

# **Options:**

94091821685.1

94091821686.2

94091821687.3

94091821688.4

Question Number: 62 Question Id: 9409185769 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

The units of 'a' the van der Waal's constant are\_\_\_\_\_

- 1, atm lit mol-1
- 2. atm lit-1 mol-1
- 3. atm lit<sup>2</sup> mol<sup>-2</sup>
- 4. atm lit<sup>-1</sup> mol<sup>-2</sup>

# **Options:**

94091821689.1

94091821690.2

94091821691.3

94091821692.4

Question Number: 63 Question Id: 9409185770 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The van der Waal's reduced equation of state is \_\_\_\_\_(where symbols have their usual meaning)

1. 
$$\left[\pi - \frac{3}{\phi^2}\right](3\emptyset + 1) = 8\theta$$

2. 
$$[3\emptyset - 1] \left[ \pi + \frac{3}{\emptyset^2} \right] = 8\theta$$

3. 
$$[3\emptyset + 1] \left[ \pi + \frac{3}{\emptyset} \right] = 8\theta$$

$$4. \left[\pi + \frac{3}{\emptyset^2}\right] \left[\frac{\emptyset}{3} + 1\right] = 8\theta$$

# **Options:**

94091821693.1

94091821694. 2

94091821695.3

94091821696.4

Question Number: 64 Question Id: 9409185771 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Gas A diffuses twice as fast as another gas B. If the vapour density of the gas A is 2, the molecular mass of gas B is

1.2

2.4

3.8

4.16

# **Options:**

94091821697.1

94091821698.2

94091821699.3

94091821700.4

Question Number: 65 Question Id: 9409185772 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The ratio of most probable velocity, average velocity and root mean square velocity of molecules of a gas is\_\_\_\_\_

1.1:1.128:1.224

2. 1.128 : 1 : 1.224

3. 1.128 : 1.224 : 1

4. 1.224 : 1 : 1.128

# **Options:**

94091821701.1

94091821702.2

94091821703.3

94091821704.4

Question Number: 66 Question Id: 9409185773 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

The mass of 2240 ml of CO <sub>2</sub> at NTP will be
1. 4.0 g
2. 4.4 g
3. 8.8 g
4. 8.0 g
Options:
94091821705. 1
94091821706. 2
94091821707. 3
94091821708. 4
Question Number : 67 Question Id : 9409185774 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
Which of the following gases will have the lowest rate of diffusion?
1. H <sub>2</sub>
2. N <sub>2</sub>
3. F <sub>2</sub>
4. O <sub>2</sub>
Options:
94091821709. 1
94091821710. 2
94091821711. 3
94091821712. 4
Question Number : 68 Question Id : 9409185775 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

In van der Waal's equation of state for a non-ideal gas the net force of attraction among the molecules is given by\_\_\_\_\_



$$2. P + \frac{an}{V^2}$$

3. 
$$P - \frac{an^2}{V}$$

$$4. -\frac{an}{V^2}$$

# **Options:**

94091821713.1

94091821714. 2

94091821715.3

94091821716.4

Question Number: 69 Question Id: 9409185776 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Amorphous substances are isotropic because

- 1. they have same value of any property in all directions
- 2. they have different values of physical properties in different directions
- 3. they have definite geometrical shape
- 4. none of the above

#### **Options:**

94091821717.1

94091821718.2

94091821719.3

94091821720.4

Question Number: 70 Question Id: 9409185777 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

For tetragonal crystal system, which of the following is not true
1. $a = b \neq c$ 2. $\alpha = \beta = \gamma = 90^{\circ}$ 3. $a \neq b \neq c$ 4. none of these
Options:
94091821721.1
94091821722. 2
94091821723. 3
94091821724. 4
Question Number : 71 Question Id : 9409185778 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
The total number of atoms in a body centred cubic unit cell is
1. 1 2. 2 3. 3 4. 4
Options:
94091821725. 1
94091821726. 2
94091821727. 3
94091821728. 4
Question Number : 72 Question Id : 9409185779 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
The co-ordination number of Na <sup>+</sup> in Na <sup>+</sup> Cl <sup>-</sup> crystal is

1. 2 2. 4 3. 6 4. 8

# **Options:** 94091821729.1 94091821730.2 94091821731.3 94091821732.4 Question Number: 73 Question Id: 9409185780 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 The Bragg's equation for diffraction of X-rays is \_\_\_\_\_\_ 1. $n \lambda = 2 d^2 \sin \theta$ 2. $n \lambda = 2 d \sin \theta$ 3. n $\lambda = 2 d \sin^2 \theta$ 4. $n \lambda = d \sin \theta$ **Options:** 94091821733.1 94091821734. 2 94091821735.3 94091821736.4 Question Number: 74 Question Id: 9409185781 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 In an ionic crystal, a cation and an anion leave the lattice to cause two vacancies. This defect is called\_\_\_\_

1. Schottky defect

- Frenkel defect
- 3. interstitial defect
- 4. none of these

### Options:

94091821737.1

94091821739.3

94091821740.4

Question Number: 75 Question Id: 9409185782 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The number of atoms per unit cell in a simple cubic and face centred cubic are......

- 1.1,4
- 2.1, 2
- 3.4, 1
- 4. 2, 1

#### **Options:**

94091821741.1

94091821742.2

94091821743.3

94091821744.4

Question Number: 76 Question Id: 9409185783 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Which of the following defects results in the decrease of density of crystal?

- 1. Schottky defect
- 2. Frenkel defect
- 3. interstitial defect
- 4. impurity defect

### **Options:**

94091821745. 1

94091821746.2

94091821747.3

94091821748.4

Question Number: 77 Question Id: 9409185784 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 A metal has face centered arrangement and edge length of the unit cell is 400 pm. The atomic radius of 'M'\_\_\_\_\_ 1. 100 pm 2. 200 pm 3. 141 pm 4. 173 pm **Options:** 94091821749.1 94091821750.2 94091821751.3 94091821752.4 Question Number: 78 Question Id: 9409185785 Question Type: MCQ Option Shuffling: No Is **Question Mandatory: No** Correct Marks: 1 Wrong Marks: 0 Experimental method to determine the rate of a reaction by measuring the change in volume of the reaction mixture is called-\_\_\_\_ 1. Hydrometry 2. Dilatometry 3. Gasometry 4. Volumetry **Options:** 

94091821753.1

94091821754. 2

94091821755.3

94091821756.4

Question Number: 79 Question Id: 9409185786 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

The correct form of Arrhenius equation is \_\_\_\_\_

1. 
$$k = Aa_e^{+E_a}/_{RT}$$

2. 
$$k = a_e^{-E_a}/RT$$

$$3. k = Aa_e^{-E_a}/_{kT}$$

4. 
$$k = Z a_e^{-E_B}/_{2.303RT}$$

#### **Options:**

94091821757.1

94091821758.2

94091821759.3

94091821760.4

Question Number: 80 Question Id: 9409185787 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Which of the following statements is incorrect about order of reaction?

- 1. Order of reaction can never be equal to zero or fractional value
- 2. It is always determined experimentally
- 3. It is equal to the molecularity of an elementary reaction
- 4. It is sum of the powers of concentration terms in the differential form of the rate law of a reaction

#### **Options:**

94091821761.1

94091821762. 2

94091821763.3

94091821764.4

Question Number: 81 Question Id: 9409185788 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Consider a reaction aG + bH → Products. When the concentration of both reactants G and H are doubled, the rate of reaction increases by eight times. However, when the concentration of G is doubled keeping the concentration of H fixed, the rate is doubled. The overall order reaction is:

- 1.0
- 2.1
- 3.2
- 4.3

#### **Options:**

94091821765.1

94091821766.2

94091821767.3

94091821768.4

Question Number: 82 Question Id: 9409185789 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

For the first order reaction

 $2N_2O_5(g) \rightarrow 4 NO_2(g) + O_2(g)$ 

- 1. Concentration of the reactant decreases exponentially with time
- 2. The half life of the reaction decreases with increasing temperature
- 3. The half life of the reaction depends on the initial concentration of the reactant
- 4. The half life of reaction is inversely proportional to square of initial concentration of N2O5

#### **Options:**

94091821769.1

94091821770.2

94091821771.3

94091821772.4

Question Number: 83 Question Id: 9409185790 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

The half life of a radioisotope is three hours. If the initial mass of the isotope were 256 g, the mass of it remaining undecayed after 18 h would be
1. 4.0g 2. 8.0g 3. 12.0g 4. 16.0g
Options :
94091821773. 1
94091821774. 2
94091821775. 3
94091821776. 4
Question Number : 84 Question Id : 9409185791 Question Type : MCQ Option Shuffling : No Is
Correct Marks : 1 Wrong Marks : 0
The half life of a radioisotope is four hours. If the initial mass of the isotope were 200 g, the mass of it remaining undecayed after 24 h would be
1. 1.042g
2. 4.167g
3. 3.125g 4. 2.084g
Options :
94091821777. 1
94091821778. 2
94091821779. 3
94091821780. 4
Question Number : 85 Question Id : 9409185792 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No

The energies of activation for forward and reverse reaction for  $A_2 + B_2 \rightarrow 2AB$  are 180 kJ.mol<sup>-1</sup> and 200 kJ.mol<sup>-1</sup> respectively. The presence of a catalyst lowers the activation energy of both (forward and reverse) reaction by 100 kJ. mol<sup>-1</sup>. The enthalpy change of the rection  $A_2 + B_2 \rightarrow 2AB$  in the presence of the catalyst will be (in kJ.mol<sup>-1</sup>)

- 1, 20
- 2.300
- 3.120
- 4, 280

#### **Options:**

94091821781.1

94091821782.2

94091821783.3

94091821784.4

Question Number: 86 Question Id: 9409185793 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The half life period of a first order reaction is 6.93 min. The time required to complete 99% of the reaction will be: (given  $\log 2 = 0.301$ )

- 1. 46.06 min
- 2. 460.6 min
- 3. 230.3 min
- 4. 23.03 min

#### **Options:**

94091821785.1

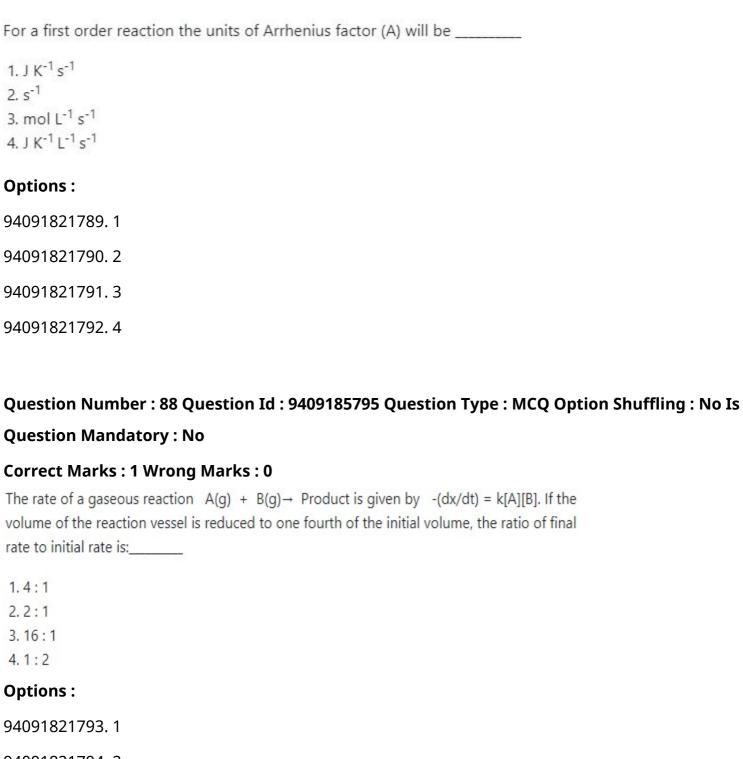
94091821786. 2

94091821787.3

94091821788.4

Question Number: 87 Question Id: 9409185794 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 



94091821794.2

94091821795.3

94091821796.4

Question Number: 89 Question Id: 9409185796 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

# For a first order reaction,\_\_\_\_\_

- 1.  $t_{0.75} = 3 t_{0.5}$
- $2. t_{0.75} = 2 t_{0.5}$
- 3.  $t_{0.75} = 1.5 t_{0.5}$
- 4.  $t_{0.75} = 4 t_{0.5}$

#### **Options:**

94091821797.1

94091821798.2

94091821799.3

94091821800.4

Question Number: 90 Question Id: 9409185797 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

**Correct Marks: 1 Wrong Marks: 0** 

An example of autocatalytic reaction is:\_\_\_\_\_

- 1. Inversion of sucrose
- 2. Mixture of KBrO<sub>3</sub>, MnSO<sub>4</sub> and malonic acid in H<sub>2</sub>SO<sub>4</sub>
- 3. Saponification of methyl acetate
- 4. Acid catalyzed Hydrolysis of methyl acetate

#### **Options:**

94091821801.1

94091821802.2

94091821803.3

94091821804.4

Question Number: 91 Question Id: 9409185798 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Velocity constant of a reaction at 290 K was found to be 3.2 x 10 <sup>-3</sup> . At 300 K it will be
1. 1.28 x 10 <sup>-2</sup>
2. 9.6 x10 <sup>-3</sup>
3. $6.4 \times 10^{-3}$
4. 3.2 x 10 <sup>-4</sup>
Options :
94091821805. 1
94091821806. 2
94091821807. 3
94091821808. 4
Question Number : 92 Question Id : 9409185799 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
The scientist who is considered as the father of chemical kinetics is :
1. Laidler
2. Arrhenius
3. van't Hoff
4. Helmholtz
Options:
94091821809. 1
94091821810. 2
94091821811. 3
94091821812. 4
Question Number : 93 Question Id : 9409185800 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0
The reaction which does not follow first order kinetics is
1. Hydrolysis of methyl acetate
2. Mutarotation of sucrose

3. Saponification of ethyl acetate

4. Decomposition of hydrogen peroxide

#### **Options:**

94091821813.1

94091821814. 2

94091821815.3

94091821816.4

Question Number: 94 Question Id: 9409185801 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The first reaction studied which showed the relation between rate and concentration of the reactant is

- 1. Hydrolysis of methyl acetate
- 2. Mutarotation of sucrose
- 3. Saponification of ethyl acetate
- 4. Decomposition of hydrogen peroxide

#### **Options:**

94091821817.1

94091821818. 2

94091821819.3

94091821820.4

Question Number: 95 Question Id: 9409185802 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

For a reaction,  $A \rightarrow \text{products}$ , a graph of [A] versus time is found to be a straight line. What is the order of this reaction?

- 1. zero order
- 2. first order
- 3. second order
- 4. third order

#### **Options:**

94091821822. 2

94091821823.3

94091821824.4

Question Number: 96 Question Id: 9409185803 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

**Correct Marks: 1 Wrong Marks: 0** 

...... Is the unit of zero order rate constant.

- 1. mol dm <sup>-3</sup> s<sup>-1</sup>
- 2, mol dm 3 s-1
- 3. mol<sup>-1</sup> dm <sup>3</sup> s<sup>-1</sup>
- 4. mol dm -3

#### **Options:**

94091821825.1

94091821826. 2

94091821827.3

94091821828.4

Question Number: 97 Question Id: 9409185804 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

**Correct Marks: 1 Wrong Marks: 0** 

Which of the following is/are the method of determination of order of reaction?

- 1. Integrated rate law method
- 2. Differential rate law method
- 3. Ostwald's dilution method
- 4. All of the above

#### **Options:**

94091821829.1

94091821830.2

94091821831.3

Question Number: 98 Question Id: 9409185805 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

Activated Complex Theory (ACT) theory was developed by \_\_\_\_\_

- 1. Eyring, Polanyi and Evans
- 2. Rice and Herzfeld
- 3. Arrhenius and van't Hoff
- 4. Ostwald

#### **Options:**

94091821833.1

94091821834. 2

94091821835.3

94091821836.4

Question Number: 99 Question Id: 9409185806 Question Type: MCQ Option Shuffling: No Is

**Question Mandatory: No** 

Correct Marks: 1 Wrong Marks: 0

The order of reaction and molecularity is equal to \_\_\_\_\_in the following reaction

- 1. acid catalyzed inversion of sucrose
- 2. hydrolysis of methyl acetate
- 3. saponification of methyl acetate
- 4. None of the above

#### **Options:**

94091821837.1

94091821838. 2

94091821839.3

94091821840.4

Question Number: 100 Question Id: 9409185807 Question Type: MCQ Option Shuffling: No

**Is Question Mandatory: No** 

The half-life of a chemical reaction is square of concentration of reactant. The reaction is ..... order.

- 1. Zero
- 2. First
- 3. Second
- 4. Third

## Options:

94091821841.1

94091821842. 2

94091821843.3