

5/11/2021

Physical Chemistry

### Physical Chemistry

Your score: 19% (4.5/24)

Duration: 0:10:50

Don't worry, try again.

1. The change in state from solid to gas is 0 / 2 points

Your Answer:  Incorrect

- Melting
- Vaporization
- Sublimation
- Condensation

2. Which of the following is / are Crystalline substance(s)? 1.5 / 2 points

Your Answer:  Partially correct

- NaCl
- KCl
- Glass
- Plastic

3. Half life of 1st order reaction is constant and is 0.693/k 0 / 2 points

Your Answer:  Incorrect

- True
- False

4. Match the following 1 / 6 points

Your Answer:  Partially correct

- Condensation  Melting or Fusion Solid to liquid
- Vaporization  Liquid to Gas
- Freezing  Sublimation Solid to Gas
- Melting or Fu  Deposition Gas to Solid
- Deposition  Condensation Gas to Liquid
- Sublimation  Freezing Liquid to Solid



5. Straight line eq. is (write equation without space) 0 / 2 points

Your Answer:  Incorrect

rate=k[A][B]

Correct Answer:

y = mx+c

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold) 0 / 2 points

Your Answer:  Incorrect

5/11/2021

Physical Chemistry

We know, t11

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is 2 / 2 points

Your Answer:  Correct

- Charle's law
- Boyle's law
- Graham's law
- Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is 0 / 2 points

Your Answer:  Incorrect

- Charle's law
- Boyle's law
- Graham's law
- Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas. this is 0 / 2 points

Your Answer:  Incorrect

- Charle's law
- Boyle's law
- Graham's law of diffusion
- Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant) 0 / 2 points

Your Answer:  Incorrect

- Charle's law
- Boyle's law
- Graham's law of diffusion
- Avogadro's hypothesis

## Physical Chemistry

Your score: 31% (7.5/24)

Duration: 0:08:30

Don't worry, try again.

1. The change in state from solid to gas is 0 / 2 points
- Your Answer:  Incorrect
- Melting
- Vaporization
- Sublimation
- Condensation
2. Which of the following is / are Crystalline substance(s)? 0.5 / 2 points
- Your Answer:  Partially correct
- NaCl
- KCl
- Glass
- Plastic
3. Half life of 1st order reaction is constant and is  $0.693/k$  2 / 2 points
- Your Answer:  Correct
- True
- False
4. Match the following 3 / 6 points
- Your Answer:  Partially correct
- Melting or Fusion  Solid to liquid
- Vaporization  Liquid to Gas
- Condensation  Sublimation Solid to Gas
- Sublimation  Deposition Gas to Solid
- Vaporization  Condensation Gas to Liquid
- Freezing  Liquid to Solid
5. Straight line eq. is (write equation without space) 0 / 2 points
- Your Answer:  Incorrect
- $\text{NaCl} + \text{H}_2\text{SO}_4 = \text{NaSO}_4 + \text{H}_2\text{d}$
- Correct Answer:  
 $y = mx + c$
6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold) 2 / 2 points
- Your Answer:  Correct

4fold

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is 0 / 2 points
- Your Answer:  Incorrect
- Charles's law
- Boyle's law
- Graham's law
- Avogadro's hypothesis
8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is 0 / 2 points
- Your Answer:  Incorrect
- Charles's law
- Boyle's law
- Graham's law
- Avogadro's hypothesis
9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas. This is 0 / 2 points
- Your Answer:  Incorrect
- Charles's law
- Boyle's law
- Graham's law of diffusion
- Avogadro's hypothesis
10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant) 0 / 2 points
- Your Answer:  Incorrect
- Charles's law
- Boyle's law
- Graham's law of diffusion
- Avogadro's hypothesis



5/11/2021

Physical Chemistry

### Physical Chemistry

Your score: 98% (23.5/24)

Duration: 0:06:54

Congratulations.

1. The change in state from solid to gas is 2 / 2 points

Your Answer: ✓ Correct

Melting

Vaporization

✓  Sublimation

Condensation

2. Which of the following is / are Crystalline substance(s)? 1.5 / 2 points

Your Answer: ✓ Partially correct

✓  NaCl

✓  KCl

✗  Glass

✗  Plastic

3. Half life of 1st order reaction is constant and is  $0.693/k$  2 / 2 points

Your Answer: ✓ Correct

✓  True

False

4. Match the following 6 / 6 points

Your Answer: ✓ Correct

✓ Melting or Fusion ✓ Solid to liquid

✓ Vaporization ✓ Liquid to Gas

✓ Sublimation ✓ Solid to Gas

✓ Deposition ✓ Gas to Solid

✓ Condensation ✓ Gas to Liquid

✓ Freezing ✓ Liquid to Solid

5. Straight line eq. is (write equation without space) 2 / 2 points

Your Answer: ✓ Correct

$Y=mx+c$

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold) 2 / 2 points

Your Answer: ✓ Correct

2 fold

5/11/2021

Physical Chemistry

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is 2 / 2 points

Your Answer: ✓ Correct

Charle's law

✓  Boyle's law

Graham's law

Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is 2 / 2 points

Your Answer: ✓ Correct

✓  Charle's law

Boyle's law

Graham's law

Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas, this is 2 / 2 points

Your Answer: ✓ Correct

Charle's law

Boyle's law

✓  Graham's law of diffusion

Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant) 2 / 2 points

Your Answer: ✓ Correct

Charle's law

Boyle's law

Graham's law of diffusion

✓  Avogadro's hypothesis



## Physical Chemistry

Your score: 44% (10.5/24)

Duration: 0:01:44

Congratulations.

1. The change in state from solid to gas is

0 / 2 points

Your Answer: ✘ Incorrect

 Melting✘  Vaporization✓  Sublimation Condensation

2. Which of the following is / are Crystalline substance(s)?

1.5 / 2 points

Your Answer: ✔ Partially correct

✓  NaCl✓  KCl✘  Glass✘  Plastic

3. Half life of 1st order reaction is constant and is 0.693/k

2 / 2 points

Your Answer: ✔ Correct

✓  True False

4. Match the following

1 / 6 points

Your Answer: ✔ Partially correct

✓ Melting or F. ✓ Solid to liquid

✘ Freezing ✓ → Vaporization Liquid to Gas

✘ Deposition ✓ → Sublimation Solid to Gas

✘ Vaporization ✓ → Deposition Gas to Solid

✘ Sublimation ✓ → Condensation Gas to Liquid

✘ Condensatio ✓ → Freezing Liquid to Solid

5. Straight line eq. is (write equation without space)

0 / 2 points

Your Answer: ✘ Incorrect

2

Correct Answer:

 $y = mx+c$ 

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold)

2 / 2 points

Your Answer: ✔ Correct

2

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp, and n. This is

0 / 2 points

Your Answer: ✘ Incorrect

 Charle's law✓  Boyle's law Graham's law✘  Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is

2 / 2 points

Your Answer: ✔ Correct

✓  Charle's law Boyle's law Graham's law Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas, this is

2 / 2 points

Your Answer: ✔ Correct

 Charle's law Boyle's law✓  Graham's law of diffusion Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant)

0 / 2 points

Your Answer: ✘ Incorrect

✘  Charle's law Boyle's law Graham's law of diffusion✓  Avogadro's hypothesis



5/11/2021

Physical Chemistry

### Physical Chemistry

Your score: 100% (24/24)

Duration: 0:05:16

Congratulations.

1. The change in state from solid to gas is 2 / 2 points

Your Answer: ✓ Correct

- Melting  
 Vaporization  
✓  Sublimation  
 Condensation

2. Which of the following is / are Crystalline substance(s)? 2 / 2 points

Your Answer: ✓ Correct

- ✓  NaCl  
✓  KCl  
✗  Glass  
✗  Plastic

3. Half life of 1st order reaction is constant and is 0.693/k 2 / 2 points

Your Answer: ✓ Correct

- ✓  True  
 False

4. Match the following 6 / 6 points

Your Answer: ✓ Correct

- ✓ Melting of F. ✓ Solid to liquid  
✓ Vaporization ✓ Liquid to Gas  
✓ Sublimation ✓ Solid to Gas  
✓ Deposition ✓ Gas to Solid  
✓ Condensatio ✓ Gas to Liquid  
✓ Freezing ✓ Liquid to Solid

5. Straight line eq. is (write equation without space) 2 / 2 points

Your Answer: ✓ Correct

y=mx+c

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold) 2 / 2 points

Your Answer: ✓ Correct

2fold (doubles)

5/11/2021

Physical Chemistry

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is 2 / 2 points

Your Answer: ✓ Correct

- Charle's law  
✓  Boyle's law  
 Graham's law  
 Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is 2 / 2 points

Your Answer: ✓ Correct

- ✓  Charle's law  
 Boyle's law  
 Graham's law  
 Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas. this is 2 / 2 points

Your Answer: ✓ Correct

- Charle's law  
 Boyle's law  
✓  Graham's law of diffusion  
 Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant) 2 / 2 points

Your Answer: ✓ Correct

- Charle's law  
 Boyle's law  
 Graham's law of diffusion  
✓  Avogadro's hypothesis



## Physical Chemistry

Your score: 100% (22/22) (2 possible points pending)

Duration: 0:04:45

Congratulations.

1. The change in state from solid to gas is 2 / 2 points

Your Answer: ✓ Correct

 Melting Vaporization✓  Sublimation Condensation

2. Which of the following is / are Crystalline substance(s)? 2 / 2 points

Your Answer: ✓ Correct

✓  NaCl✓  KCl✗  Glass✗  Plastic

3. Half life of 1st order reaction is constant and is 0.693/k 2 / 2 points

Your Answer: ✓ Correct

✓  True False

4. Match the following 6 / 6 points

Your Answer: ✓ Correct

✓ Melting or FL ✓ Solid to liquid

✓ Vaporization ✓ Liquid to Gas

✓ Sublimation ✓ Solid to Gas

✓ Deposition ✓ Gas to Solid

✓ Condensatio ✓ Gas to Liquid

✓ Freezing ✓ Liquid to Solid

5. Straight line eq. is (write equation without space) 2 / 2 points

Your Answer: ✓ Correct

y=mx+c

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold) 2 / 2 points

Your Answer: ? Awaiting score

2 folds



7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is 2 / 2 points

Your Answer: ✓ Correct

 Charle's law✓  Boyle's law Graham's law Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is 2 / 2 points

Your Answer: ✓ Correct

✓  Charle's law Boyle's law Graham's law Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas. this is 2 / 2 points

Your Answer: ✓ Correct

 Charle's law Boyle's law✓  Graham's law of diffusion Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant) 2 / 2 points

Your Answer: ✓ Correct

 Charle's law Boyle's law Graham's law of diffusion✓  Avogadro's hypothesis

5/11/2021

Physical Chemistry

Snehal Prakash Gavhane  
May 21, 2020, 4:37 p.m.

### Physical Chemistry

Your score: 0% (0/22)  
Duration: 1 day, 2:59:38

Don't worry, try again.

1. The change in state from solid to gas is 0 / 2 points

Your Answer:  Blank

- Melting  
 Vaporization  
 Sublimation  
 Condensation

2. Which of the following is / are Crystalline substance(s)? 0 / 2 points

Your Answer:  Blank

- NaCl  
 KCl  
 Glass  
 Plastic

3. Half life of 1st order reaction is constant and is 0.693/k 0 / 2 points

Your Answer:  Blank

- True  
 False

4. Match the following 0 / 6 points

Your Answer:  Blank

- Melting or Fusion Solid to Liquid  
  → Vaporization Liquid to Gas  
  → Sublimation Solid to Gas  
  → Deposition Gas to Solid  
  → Condensation Gas to Liquid  
  → Freezing Liquid to Solid

5. Straight line eq. is (write equation without space) 0 / 2 points

Your Answer:  Blank

Correct Answer:  
 $y = mx + c$

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold) 0 / 2 points

Your Answer:  Blank

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is 0 / 2 points

5/11/2021

Physical Chemistry

Your Answer:  Blank

- Charles law  
 Boyle's law  
 Graham's law  
 Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is 0 / 2 points

Your Answer:  Blank

- Charles law  
 Boyle's law  
 Graham's law  
 Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas, this is 0 / 2 points

Your Answer:  Blank

- Charles law  
 Boyle's law  
 Graham's law of diffusion  
 Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant) 0 / 2 points

Your Answer:  Blank

- Charles law  
 Boyle's law  
 Graham's law of diffusion  
 Avogadro's hypothesis



## Unit Test-1\_S.Y.B.Sc (Organic Chemistry) 2020-21

\* Required

1. Email \*

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2. 1. The correct increasing order of pKa value for (A) Phenol, (B) 2-Nitrophenol, (C) 4-Nitrophenol, (D) 2-methoxyphenol is <sup>\* 2 points</sup>

Mark only one oval.

- A < B < C < D  
 B < D < C < A  
 C < B < A < D  
 None of the above

3. 2. Boiling point of 2-Nitrophenol will be lower than than 4-nitrophenol \*

2 points

Mark only one oval.

- True  
 False  
 Boiling point will be same.

4. 3. Isopropylbenzene on treatment of Oxygen followed by action of acid gives \*

2 points

Mark only one oval.

- Phenol and Acetone  
 Acetone and methylbenzene  
 Butanone and Phenol  
 None of the above

5. 4. Phenol and methyl sulphate react to give \*

2 points

Mark only one oval.

- Toluene  
 Anisole  
 Both Anisole and Toluene  
 None of the above





8/23/22, 5:53 PM

Unit Test-1\_S.Y.B.Sc (Organic Chemistry) 2020-21

6. 5. Phenyl acetate can be prepared using \*

2 points

*Check all that apply*

- Benzoic acid and methanol
- Acetic acid and Phenol
- Phenol and acetic anhydride
- None of the above
- All of the above

7. 6. The True statement is (are) : A) Phenols are soluble in water; B) Phenols are soluble in organic solvents \*

2 points

*Mark only one oval.*

- Both A and B
- Only A
- Only B
- Neither A nor B

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3/9

8/23/22, 5:53 PM

Unit Test-1\_S.Y.B.Sc (Organic Chemistry) 2020-21

8. 7. Phenols on treatment with conc. H<sub>2</sub>SO<sub>4</sub> at low temperature gives \*

2 points

*Mark only one oval.*

- m-phenolsulphonic acid
- o-phenolsulphonic acid
- p-phenolsulphonic acid
- Mixture of all the above three

9. 8. Phenols on treatment with bromine water gives \*

2 points

*Mark only one oval.*

- 3-bromobenzene
- 2,4-dibromophenol
- 2-bromophenol + 4-bromophenol
- 2,4,6-tribromophenol

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4/9



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Unit Test-1\_S.Y.B.Sc (Organic Chemistry) 2020-21

10. 9. Phenyl acetate on Fries rearrangement gives \*

2 points

Mark only one oval.

- 2-hydroxy acetophenone
- 3-hydroxy acetophenone
- 4-hydroxy acetophenone
- Mixture of 2- and 4-hydroxy acetophenone

11. 10. Phenol on action of i. aq. NaOH, ii. CO<sub>2</sub> and iii. dil. HCl gives \*

2 points

Check all that apply.

- p-hydroxy benzoic acid
- Benzoic acid
- salicylic acid
- Phenyl acetate

12. 11. Substrate and product in Gatterman Koch reaction is (respectively) \*

2 points

Mark only one oval.

- Benzene and Benzaldehyde
- Phenol and acetaldehyde
- Benzaldehyde and phenol
- None of the above

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5/9

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Unit Test-1\_S.Y.B.Sc (Organic Chemistry) 2020-21

13. 12. Product of benzoin condensation is \*

2 points

Mark only one oval.

- Acyloln
- Benzoin
- Benzoic acid
- None of the above

14. 13. Name the product of aldol condensation of acetaldehyde \*

2 points

Mark only one oval.

- But-2-enal
- Butane-2,4-dione
- Butyraldehyde
- None of the above

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6/9



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Unit Test-1\_S.Y.B.Sc (Organic Chemistry) 2020-21

15. 14. Knoevenangel Reaction best proceeds with \*

2 points

Mark only one oval.

- Aliphatic aldehydes
- Aliphatic ketones
- Aromatic aldehydes
- Aromatic ketones

16. 15. Mannich reaction occur between \*

2 points

Mark only one oval.

- Aldehyde and Amine only
- Aldehyde and Ketone only
- Amine, Aldehyde and Ketone
- Amine and Ketone only

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Unit Test-1\_S.Y.B.Sc (Organic Chemistry) 2020-21

17. 16. Baeyer Villigar oxidation gives \*

2 points

Mark only one oval.

- Acid from carbonyl compound
- Ester from carbonyl compound
- Both above
- None of the above

18. 17. In general, Electrophilicity of carbonyl Carbon of aldehyde is more than that of ketone \*

2 points

Mark only one oval.

- True
- False

19. 18. Catalyst and co-catalyst in Gatterman Koch reaction are \*

2 points

Mark only one oval.

- AlCl<sub>3</sub> and CuCl
- CuCl and AlCl<sub>3</sub>
- ZnCl<sub>2</sub> and CuCl
- CuCl and ZnCl<sub>2</sub>

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8/9



20. 19. Substrate for Gatterman Reaction is \*

2 points

Mark only one oval.

- Phenol  
 Ketone  
 Benzene  
 None of the above

21. 20. In Baeyer Villiger oxidation reaction the migratory aptitude follow the trend \*

2 points

Mark only one oval.

- Tertiary > Secondary > Primary  
 Tertiary > Secondary < Primary  
 Tertiary < Secondary < Primary  
 Tertiary < Secondary > Primary

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Google Forms

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99

2. Roll No.

3. The valency of carbon atoms in ethene molecule

2 points

Mark only one oval.

- 3  
 4  
 2  
 0

4. Hybridization of doubly bonded carbon atoms in alkene is

2 points

Mark only one oval.

- sp  
 sp<sup>2</sup>  
 sp<sup>3</sup>  
 none of these

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1/15



5. Valency of carbon atom having one unpaired electron in alkyl free radical is 2 points

Mark only one oval.

- 2  
 3  
 4  
 5

6. Homolytic cleavage of chemical compound affords 2 points

Mark only one oval.

- Cation e.g. Carbocation  
 Free radicals  
 Anions e.g. Carbanion  
 none of these

7. Nitrogen and Hydrogens in Ammonia (NH<sub>3</sub>) is 2 points

Mark only one oval.

- Divalent and Trivalent respectively  
 Trivalent and Univalent respectively  
 Univalent and Tetravalent respectively  
 Univalent and divalent respectively

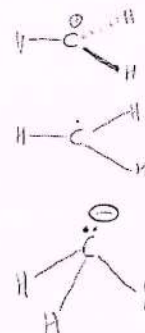
Reactive intermediates

8. Names of the above chemical species from top to bottom are respectively, 2 points

Mark only one oval.

- Methyl carbocation, methyl Carbanion and Methyl free radical  
 Methyl carbocation, methyl free radical and Methyl Carbanion  
 Methyl Carbanion, Methyl carbocation and methyl free radical  
 methyl free radical, Methyl carbocation and Methyl Carbanion

Next 4 questions are based on the following Reactive intermediates



9. W/points:

hi  
c  
h  
re  
a  
ct  
iv  
e  
in  
te  
r  
m  
e  
di  
at  
e(  
s)  
ar  
e  
el  
e  
ct  
ro  
p  
hi  
lic  
i.  
e.  
el  
e  
ct  
ro  
n  
d  
ef  
ici  
e  
nt

Mark  
only  
one  
oval.





(a)  
Methyl free radical (b)  
Methyl carbanion (c)  
Methyl carbocation bo)  
Methyl carbanion and (c)

10. Which reactive intermediate(s) are nucleophilic i.e. electron rich

2 points

Mark only one oval.

- (a) Methyl free radical  
 (b) Methyl carbanion  
 (c) Methyl carbocation  
 both (a) and (c)

11. Heterolytic cleavage of methyl bromide afford(s)

2 points

Mark only one oval.

- (a) Methyl free radical  
 (b) Methyl carbanion  
 (c) Methyl carbocation  
 either (b) or (c)

12. Hybridizations of carbon in the above chemical species from top to bottom are respectively

2 points

Mark only one oval.

- sp<sup>2</sup>, sp<sup>2</sup> and sp<sup>3</sup>  
 sp<sup>2</sup>, sp<sup>3</sup> and sp<sup>3</sup>  
 sp<sup>3</sup>, sp<sup>3</sup> and sp<sup>2</sup>  
 sp<sup>2</sup>, sp<sup>2</sup> and sp<sup>2</sup>

Stereochemistry

13. Stereoisomer which rotates the plane of polarized light clock-wise is called

2 points

Mark only one oval.

- levorotatory  
 dextrorotatory  
 diastereoisomer  
 trans isomer

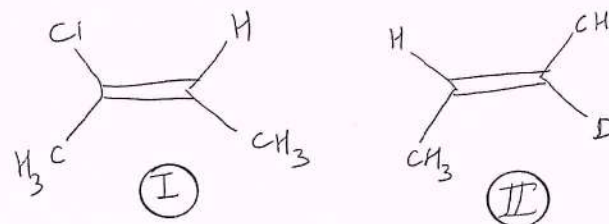
14. cis/trans isomerism is not possible in

2 points

Mark only one oval.

- But-2-ene  
 Pent-2-ene  
 But-1-ene  
 1,2-Dichloroethene

Next 3 questions are based on following chemical structures



15. Configuration

of rotation of compound is

Mark only one oval.

- Z  
 E  
 cis  
 trans



16. Configuration of compound (II) is

2 points

Mark only one oval.

- Z i.e. cis  
 E i.e. trans

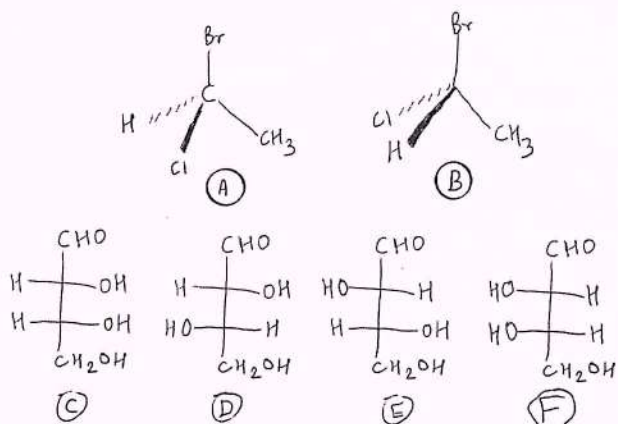
17. Which priority order is correct according to CIP rules

2 points

Mark only one oval.

- CH<sub>3</sub> > Cl  
 D > CH<sub>3</sub>  
 H > D  
 Cl > CH<sub>3</sub>

Next 6 questions are based on the following structures



18. Which of these compounds are chiral and hence optically active

2 points

Mark only one oval.

- A and B only  
 A, B, D and E only  
 C and F only  
 All A to F

19. Which of the following statements is correct about relations between these stereo isomers

2 points

Mark only one oval.

- C and F are enantiomers  
 C and D are enantiomers  
 C and F are Diastereoisomers  
 D and E are Diastereomers

20. Which of the following statements is incorrect about these stereoisomers (A and B)

2 points

Mark only one oval.

- A and B are optical isomers i.e. enantiomers of each other  
 A and B both have chiral carbon or chiral center or asymmetric center or stereogenic center  
 Absolute Configuration of A is (S) while that of B is (R)  
 A and B are not mirror images of each other

21. Which of the following statements is incorrect about these stereoisomers (C, D, E and F)

2 points

Mark only one oval.

- Isomer (C) is D-Erythrose and isomer (F) is L-Erythrose  
 isomer (D) is L-Threose and isomer (E) is D-Threose  
 C-F and D-E are enantiomeric pairs i.e. C and F are enantiomers of each other and D and E are enantiomers of each other  
 isomers D, E and F are diastereomers of isomer C



22. which of the following is not diastereomeric pair 2 points

Mark only one oval.

- C and D  
 C and E  
 C and F  
 D and F

23. Which of the following is/are correct enantiomeric pair(s) 2 points

Mark only one oval.

- A and B  
 C and F  
 D and E  
 All of these

24. Compounds having same MF but different structures are called 2 points

Mark only one oval.

- Isotopes  
 Isomers  
 Isotones  
 Isobars

25. Isomers having same linkages or connectivity but different spatial arrangements of atoms and are not interchangeable are called 2 points

Mark only one oval.

- Constitutional isomers  
 structural isomers  
 Stereoisomers  
 Tautomers

26. Stereoisomers which are not mirror images of each other are called 2 points

Mark only one oval.

- Constitutional isomers  
 structural isomers  
 Diastereoisomers  
 Enantiomers

27. Isomers which are non-superimposable mirror images of each other OR Configurational Stereoisomers which are mirror images of each other are called 2 points

Mark only one oval.

- Constitutional isomers  
 structural isomers  
 Diastereoisomers  
 Enantiomers

28. Carbon having four different atoms or groups is called 2 points

Mark only one oval.

- Stereogenic center  
 Chiral Center or chiral carbon  
 Asymmetric carbon or Asymmetric center  
 All of these

29. How many structural isomers are possible for C<sub>5</sub>H<sub>11</sub>Br 2 points

Mark only one oval.

- 8  
 7  
 6  
 5



30.  $\text{CH}_3\text{-CH}_2\text{-OH}$  and  $\text{CH}_3\text{-O-CH}_3$  are 2 points

Mark only one oval.

- Functional group isomers  
 Chain isomers or skeletal isomers  
 Tautomers  
 Positional isomers

31. Butane and Isobutane are 2 points

Mark only one oval.

- Functional group isomers  
 Chain isomers or skeletal isomers  
 Tautomers  
 Positional isomers

32. Reactions in which atoms or groups are migrated from one part of the molecule to the other part and linkages changed during the reaction are called 2 points

Mark only one oval.

- addition reactions  
 elimination reactions  
 rearrangements  
 substitution reactions

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## 26 May 2021\_Chemistry\_MSc\_Entrance Preparation

Total marks = 10

\* Required

1. Name \*

.....

2. Class \*

Mark only one oval.

- FYBSc  
 SYBSc  
 TYBSc

3. Average atomic mass of Mg is (Given atomic masses and % natural abundance of isotopes of Mg are  $^{24}\text{Mg} = 23.985 \text{ u}$  (78.99 %),  $^{25}\text{Mg} = 24.986 \text{ u}$  (10.00 %),  $^{26}\text{Mg} = 25.983 \text{ u}$  (11.01 %)) 2 points

Mark only one oval.

- 24.31 u  
 24.32 u  
 24.28 u  
 24.29 u



4. Average atomic mass of Br is (Given atomic masses and % natural abundance of isotopes of Br are  $^{79}\text{Br} = 78.918 \text{ u}$  (50.69 %),  $^{81}\text{Br} = 80.916 \text{ u}$  (49.31 %),) 2 points

Mark only one oval.

- 80.00 u  
 80.01 u  
 79.90 u  
 79.97 u

5. Weight of one atom of Carbon-12 isotope is, (Given  $N_A = 6.022 \times 10^{23} \text{ mol}^{-1}$ ) 2 points

Mark only one oval.

- a)  $1.993 \times 10^{-23} \text{ g}$   
 b)  $1.993 \times 10^{-26} \text{ kg}$   
 c) 12 g  
 d) both a and b

6. Consider 1.8 g of pure water. what is the  $n(\text{H}_2\text{O})$ ,  $n(\text{H})$  and  $n(\text{O})$  in it? 2 points

Mark only one oval.

- $n(\text{H}_2\text{O}) = 1 \text{ mol}$ ,  $n(\text{H}) = 1 \text{ mol}$  and  $n(\text{O}) = 0.5 \text{ mol}$   
  $n(\text{H}_2\text{O}) = 0.1 \text{ mol}$ ,  $n(\text{H}) = 0.2 \text{ mol}$  and  $n(\text{O}) = 0.5 \text{ mol}$   
  $n(\text{H}_2\text{O}) = 0.1 \text{ mol}$ ,  $n(\text{H}) = 0.2 \text{ mol}$  and  $n(\text{O}) = 0.1 \text{ mol}$   
  $n(\text{H}_2\text{O}) = 1 \text{ mol}$ ,  $n(\text{H}) = 2 \text{ mol}$  and  $n(\text{O}) = 1 \text{ mol}$

7. what is the % by weight (approx.) of Ca in  $\text{CaCO}_3$  ? ( given atomic masses: 2 points  
Ca = 40.078 u, C= 12.011 u, O= 15.999 u )

Mark only one oval.

- 60 %  
 40 %  
 50 %  
 30 %

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## Mathematics MAT-101 (Geometry) Internal Test

Date: 9th January 2023

\* Required

1. Full Name \*

\_\_\_\_\_

2. Exam Seat No. \*

\_\_\_\_\_

Multiple Choice Questions:



3. Distance between points (0,0,0) and (1,1,1) in 3-dimensional coordinate system is \* 1 point

Mark only one oval.

1	$\sqrt{2}$
---	------------

Option 1

Option 2

$\sqrt{3}$	0
------------	---

Option 3

Option 4

4. The direction ratios of the line perpendicular to the following plane are \* 1 point

$$x - 2y + 3z - 3 = 0$$

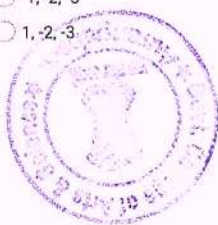
Mark only one oval.

1, 2, 3

-1, 2, -3

-1, -2, -3

1, -2, -3



5. The angle between two lines with direction ratios 1, 0, 1 and 0, 1, 0 is \* 1 point

Mark only one oval.

0	$\pi$
---	-------

Option 1

Option 2

$\frac{\pi}{2}$	$\frac{\pi}{4}$
-----------------	-----------------

Option 3

Option 4

6. The angle between following two planes is \*

1 point

$$1 + 2y + 3z = 2, 1 + 2y + 3z = 3$$

Mark only one oval.

$0$	$\pi$
-----	-------

Option 1

Option 2

$\frac{\pi}{2}$	$\frac{\pi}{4}$
-----------------	-----------------

Option 3

Option 4

7. The centre of the following sphere is \*

1 point

$$x^2 + y^2 + z^2 - 6x + 8y - 10z + 9 = 0$$

Mark only one oval.

- (-6, 8, -10)  
 (6, -8, 10)  
 (-3, 4, -5)  
 (3, -4, 5)

8. The radius of the following sphere is \*

1 point

$$x^2 + y^2 + z^2 + 2x - 4y - 6z + 5 = 0$$

Mark only one oval.

- 1  
 2  
 3  
 4

9. Intersection of two spheres is \*

1 point

Mark only one oval.

- Line  
 Plane  
 Circle  
 None of the above

10. Intersection of two planes is \*

1 point

Mark only one oval.

- Line  
 Plane  
 Circle  
 None of the above





11. What is the semi-vertical angle of the following right circular cone? \*

1 point

$$x^2 + y^2 = z^2$$

Mark only one oval.

0	$\frac{\pi}{2}$
---	-----------------

Option 1

Option 2

$\frac{\pi}{3}$	$\frac{\pi}{4}$
-----------------	-----------------

Option 3

Option 4

12. What is the axis of the following right circular cylinder? \*

1 point

$$x^2 + y^2 = 4$$

Mark only one oval.

- X-axis
- Y-axis
- Z-axis
- None of the above



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# Mathematics MAT-102 (Differential Calculus) Internal Test

Date: 9th January 2023

\* Required

1. Exam Seat No.: \*

\_\_\_\_\_

2. Full Name: \*

\_\_\_\_\_

Questions:

3. Which of the following sequence of real numbers is not convergent? \*

1 point

Mark only one oval.

$$\left\{ \frac{1}{n} \right\}_{n=1}^{\infty}$$

Option 1

$$\left\{ \frac{(-1)^n}{n} \right\}_{n=1}^{\infty}$$

Option 2

$$\left\{ \frac{n}{n+1} \right\}_{n=1}^{\infty}$$

Option 3

$$\{(-1)^n\}_{n=1}^{\infty}$$

Option 4



4. Limit inferior of the following sequence of real numbers is \*

1 point

$$\left\{ \frac{(-1)^{n+1}}{n^2} \right\}_{n=1}^{\infty}$$

Mark only one oval.

 0

Option 1

 1

Option 2

  $\frac{1}{4}$ 

Option 3

  $-\frac{1}{4}$ 

Option 4

5. Limit superior of the following sequence of real numbers is \*

1 point

$$\left\{ (-1)^{n+1} \right\}_{n=1}^{\infty}$$

Mark only one oval.

-1

1

0

None of the above

6. Which of the following function is increasing function? \*

1 point

Mark only one oval.

  $x^2$ 

Option 1

  $x^3$ 

Option 2

  $\sin x$ 

Option 3

  $e^{-x}$ 

Option 4



7. What is the nth derivative of  $\sin(ax+b)$  w.r.t.  $x$ ? \*

1 point

Mark only one oval.

$a^n \cdot \sin\left(\frac{n\pi}{2} + ax + b\right)$	$a^n \cdot \sin\left(\frac{\pi}{2} + ax + b\right)$
--	---

Option 1

Option 2

$a^n \cdot \sin\left(\frac{n\pi}{2} + ax\right)$	$\sin\left(\frac{n\pi}{2} + ax + b\right)$
--	--

Option 3

Option 4

8. What is the 5th derivative of the following function w.r.t.  $x$ ? \*

1 point

$$e^{2x}$$

Mark only one oval.

$16 \cdot e^{2x}$	$32 \cdot e^{2x}$
-------------------	-------------------

Option 1

Option 2

$e^x$	$e^{2x}$
-------	----------

Option 3

Option 4



9. What is the maximum value of the directional derivative of the following scalar function at point (1, 1, 1)? \* 1 point

$$\phi(x, y, z) = x + y^2 + z^3$$

Mark only one oval.

0	6
---	---

Option 1

Option 2

$\sqrt{13}$	$\sqrt{14}$
-------------	-------------

Option 3

Option 4

10. What is the divergence of the following vector function? \* 1 point

$$\vec{r} = x \hat{i} + y \hat{j} + z \hat{k}$$

Mark only one oval.

- 0  
 1  
 3  
 None of the above

11. What is the curl of the following vector function? \* 1 point

$$\vec{r} = x \hat{i} + y \hat{j} + z \hat{k}$$

Mark only one oval.

$\vec{0}$	$\hat{i} + \hat{j} + \hat{k}$
-----------	-------------------------------

Option 1

Option 2

$x \hat{i} + y \hat{j} + z \hat{k}$	<i>None of the above</i>
-------------------------------------	--------------------------

Option 3

Option 4

12. Which of the following identity(ities) is(are) true? \* 1 point

I.  $\text{curl}(\text{grad } \phi) = 0$ .

II.  $\text{div}(\text{curl } f) = 0$ .

Mark only one oval.

- Only I, but not II  
 Only II, but not I  
 Both I and II  
 Neither I nor II



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## Internal Test Statistics STA-111 Descriptive Statistics-I

**Class :** B.Sc.-I (Semester: I)

**Subject :** Statistics.

**Descriptive Statistics-I**

**- 12:00 PM**

**Date :** 6/1/2023

**Paper (101) :**

**Time :** 11:00 AM

**Marks : 10**

\* Required

1. Full Name: \*

\_\_\_\_\_

2. Exam Seat No.: \*

\_\_\_\_\_

Multiple Choice Questions

3. The Relation between A.M. , G.M. , and H.M. is : \*

1 point

Mark only one oval.

A.M = G.M = H.M

A.M  $\geq$  G.M  $\geq$  H.M

A.M  $\leq$  G.M  $\leq$  H.M

A.M  $\neq$  G.M  $\neq$  H.M





4. Range is calculated by formula : \*

1 point

Mark only one oval.

- R = L + S
- R = L x S
- R = L / S
- R = L - S

5. What is the mean of the following numbers: \*  
24, 56, 85, 60, 50 ?

1 point

Mark only one oval.

- 49
- 34
- 55
- 60

6. What are the variables whose calculation is done according to the weight, height, and length known as?

\* 1 point

Mark only one oval.

- Qualitative
- Quantitative
- Flow-chart
- None of these

7. Which one is the true example of primary data from the following options?

\* 1 point

Mark only one oval.

- Journal
- Book
- Newspaper
- Census

8. The second quartile, which is denoted by  $Q_2$ , is also known as \_\_\_\_\_ . \*

1 point

Mark only one oval.

- Mean
- Median
- Mode
- Range

9. Histogram is a graph of \_\_\_\_\_ . \*

1 point

Mark only one oval.

- Frequency distribution
- Time series
- Qualitative data
- None of These



# Internal Test Statistics STA-112

## Probability Theory

Class : B.Sc.-I (Semester-I)

Sub : Statistics.

Date :6/1/2023

Paper : Probability theory Time : 11AM - 12PM

\* Required

1. Your Name \*

\_\_\_\_\_

2. Exam Seat No. \*

\_\_\_\_\_

### Multiple Choice Questions

3. Q1 An event in the Probability that will never happened is called as 1 point

Mark only one oval.

- Unsure event
- Sure event
- Possible event
- Impossible event

4. Q2 Which of the following probability can not exist? 1 point

Mark only one oval.

- 2/5
- 1.5
- 1
- None of the above

5. Q3 If  $P$  is the Probability of an event, what is the probability of its complement? 1 point

Mark only one oval.

- 1-1/P
- P-1
- 1-P
- None of the above

6. Q4 Which of the following is not true about the Cumulative distribution function (CDF). 1 point

Mark only one oval.

- CDF is a monotone non decreasing function
- CDF is bounded between 0 and 1
- $F_x(\infty)=0$
- $F_x(-\infty)=0$
- Other: \_\_\_\_\_

7. Q5 If  $A$  and  $B$  are independent then which of the following is false. 1 point

Mark only one oval.

- $A$  and  $B'$  are also independent
- $A'$  and  $B$  are also independent
- $A'$  and  $B'$  are also independent
- $A'$  and  $B'$  are not independent



10. The data Collected by Other source or people is called as \_\_\_\_\_ data \* 1 point

Mark only one oval.

- Primary
- Secondary
- Both of Above
- None of Above

11. Square root of Variance is formula of \_\_\_\_\_ . \* 1 point

Mark only one oval.

- Median
- Co-efficient of Variation (C.V)
- Standard Deviation (S.D.)
- None of Above

12. What is Median and Mode of the following data ? \* 1 point

X	Frequency
100	8
150	12
200	30
250	15
300	5

Mark only one oval.

- 30
- 200
- 150
- 300

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8. Q6 If  $P(A \cap B) = 0$  Then the two event A and B are.

1 point

Mark only one oval.

- Mutually exclusive  
 Exhaustive  
 Equally likely  
 Independent

9. Q7 If X and Y are random variable, and a ,b are constant,which of the condition cannot hold.

1 point

Mark only one oval.

- $E(X+Y) = E(X) + E(Y)$   
  $E[af(X)] = aE[f(X)]$   
  $\text{Var}[aX+b] = a^2\text{Var}(X)$   
  $\text{Var}[aX+b] = a\text{Var}[X] + \text{Var}[b]$

10. Q8 formula for Bayes Theorem is .

1 point

Mark only one oval.

- $P(A|B) = (P(B|A)P(A))/P(B)$   
  $P(A|B) = P(A)/P(B)$   
  $P(A|B) = P(B|A)/P(B)$   
  $P(A|B) = 1/P(B)$

11. Q9 A,B,C are three arbitrary events. Which of the following expression hold for , " At least one event occurs".

1 point

Mark only one oval.

- $A \cap B \cap C'$   
  $A \cap B \cap C$   
  $A \cap B \cap C$   
  $A \cup B \cup C$

12. Q10 Let say two events satisfy the following equation  
 $P(A \cap B) = P(A) * P(B)$

1 point

We say that event A and B are .

Mark only one oval.

- Independent event  
 Mutually exclusive  
 Disjoint event  
 Dependent event

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## Physical Chemistry

Your score: 98% (23.5/24)

Duration: 0:04:00

Congratulations.

1. The change in state from solid to gas is 2 / 2 points
- Your Answer:  Correct
- Melting
- Vaporization
- Sublimation
- Condensation
2. Which of the following is / are Crystalline substance(s)? 1.5 / 2 points
- Your Answer:  Partially correct
- NaCl
- KCl
- Glass
- Plastic
3. Half life of 1st order reaction is constant and is 0.693/k 2 / 2 points
- Your Answer:  Correct
- True
- False
4. Match the following 6 / 6 points
- Your Answer:  Correct
- Melting or Fusion  Solid to liquid
- Vaporization  Liquid to Gas
- Sublimation  Solid to Gas
- Deposition  Gas to Solid
- Condensation  Gas to Liquid
- Freezing  Liquid to Solid
5. Straight line eq. is (write equation without space) 2 / 2 points
- Your Answer:  Correct
- $Y = mx + c$
6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold) 2 / 2 points
- Your Answer:  Correct
- 2 fold

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is 2 / 2 points
- Your Answer:  Correct
- Charles law
- Boyle's law
- Graham's law
- Avogadro's hypothesis
8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is 2 / 2 points
- Your Answer:  Correct
- Charles law
- Boyle's law
- Graham's law
- Avogadro's hypothesis
9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas. this is 2 / 2 points
- Your Answer:  Correct
- Charles law
- Boyle's law
- Graham's law of diffusion
- Avogadro's hypothesis
10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant) 2 / 2 points
- Your Answer:  Correct
- Charles law
- Boyle's law
- Graham's law of diffusion
- Avogadro's hypothesis



## Physical Chemistry

Your score: 56% (13.5/24)

Duration: 0:02:40

Congratulations.

1. The change in state from solid to gas is

2 / 2 points

Your Answer:  Correct Melting Vaporization Sublimation Condensation

2. Which of the following is / are Crystalline substance(s)?

1.5 / 2 points

Your Answer:  Partially correct NaCl KCl Glass Plastic

3. Half life of 1st order reaction is constant and is  $0.693/k$

2 / 2 points

Your Answer:  Correct True False

4. Match the following

4 / 6 points

Your Answer:  Partially correct Melting or Fu  Solid to liquid Vaporization  Liquid to Gas Sublimation  Solid to Gas Deposition  Gas to Solid Sublimation  Condensation Gas to Liquid Condensatio  Freezing Liquid to Solid

5. Straight line eq. is (write equation without space)

0 / 2 points

Your Answer:  Incorrect $x+y=z$ 

Correct Answer:

 $y = mx+c$ 

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold)

0 / 2 points

Your Answer:  Incorrect

Hm

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is

0 / 2 points

Your Answer:  Incorrect Charle's law Boyle's law Graham's law Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is

2 / 2 points

Your Answer:  Correct Charle's law Boyle's law Graham's law Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas. this is

2 / 2 points

Your Answer:  Correct Charle's law Boyle's law Graham's law of diffusion Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature ( $T = \text{constant}$ )

0 / 2 points

Your Answer:  Incorrect Charle's law Boyle's law Graham's law of diffusion Avogadro's hypothesis



5/11/2021

Physical Chemistry

## Physical Chemistry

Your score: 69% (16.5/24)

Duration: 0:02:54

Congratulations.

1. The change in state from solid to gas is

2 / 2 points

Your Answer:  Correct Melting Vaporization Sublimation Condensation

2. Which of the following is / are Crystalline substance(s)?

1.5 / 2 points

Your Answer:  Partially correct NaCl KCl Glass Plastic

3. Half life of 1st order reaction is constant and is  $0.693/k$

0 / 2 points

Your Answer:  Incorrect True False

4. Match the following

3 / 6 points

Your Answer:  Partially correct Condensation  Melting or Fusion Solid to liquid Vaporization  Liquid to Gas Condensation  Sublimation Solid to Gas Deposition  Gas to Solid Melting or Fu  Condensation Gas to Liquid Freezing  Liquid to Solid

5. Straight line eq. is (write equation without space)

2 / 2 points

Your Answer:  Correct

Y=mx+c

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold)

2 / 2 points

Your Answer:  Correct

2



5/11/2021

Physical Chemistry

7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is

2 / 2 points

Your Answer:  Correct Charle's law Boyle's law Grahm's law Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is

0 / 2 points

Your Answer:  Incorrect Charle's law Boyle's law Grahm's law Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas, this is

2 / 2 points

Your Answer:  Correct Charle's law Boyle's law Grahm's law of diffusion Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant)

2 / 2 points

Your Answer:  Correct Charle's law Boyle's law Grahm's law of diffusion Avogadro's hypothesis

## Physical Chemistry

Your score: 48% (11.5/24)

Duration: 0:09:36

Congratulations.

1. The change in state from solid to gas is 2 / 2 points

Your Answer:  Correct Melting Vaporization Sublimation Condensation

2. Which of the following is / are Crystalline substance(s)? 1.5 / 2 points

Your Answer:  Partially correct NaCl KCl Glass Plastic

3. Half life of 1st order reaction is constant and is  $0.693/k$  0 / 2 points

Your Answer:  Incorrect True False

4. Match the following 6 / 6 points

Your Answer:  Correct Melting or FL  Solid to liquid Vaporization  Liquid to Gas Sublimation  Solid to Gas Deposition  Gas to Solid Condensatio  Gas to Liquid Freezing  Liquid to Solid

5. Straight line eq. is (write equation without space) 2 / 2 points

Your Answer:  Correct

Y=mx+c

6. As temperature increased by 10 degrees, rate of reaction increases by (Write any one Ans: 2 fold or 3 fold or 4 fold) 0 / 2 points

Your Answer:  Incorrect

0

Abhishek Tukaram Bembale

May 16, 2020, 8:12 a.m.



7. Pressure of the gas is directly proportional to the Volume of gas at const. Temp. and n. This is 0 / 2 points

Your Answer:  Incorrect Charle's law Boyle's law Graham's law Avogadro's hypothesis

8. Volume of the gas is directly proportional to the Temperature of the gas at const. Pressure and n. This is 0 / 2 points

Your Answer:  Incorrect Charle's law Boyle's law Graham's law Avogadro's hypothesis

9. Rate of diffusion of gas is inversely proportional to the square root of Molar mass of the gas. this is 0 / 2 points

Your Answer:  Incorrect Charle's law Boyle's law Graham's law of diffusion Avogadro's hypothesis

10. Equal volumes of all gases contain equal number of gas molecules at given temperature (T = constant) 0 / 2 points

Your Answer:  Incorrect Charle's law Boyle's law Graham's law of diffusion Avogadro's hypothesis