



## CHEMISTRY

# BOOKS - VGS BRILLIANT CHEMISTRY (TELUGU ENGLISH)

## ATOMS AND MOLECULES

**Improve Your Learning**

1. Explain the process and precautions in verifying law of conservation of mass

(OR)

Explain the procedure to prove in a chemical reaction the mass neither created nor destroyed.



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2. 0.24 g sample of compound of oxygen and boron was found by analysis to contain 0.144 g of oxygen and 0.096 g of boron. Calculate the percentage composition of the compound by weight.



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3. Lakshmi gives statement "CO and Co both represent element". Is it correct? State reason.



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4. What is the chemical name and formula of table salt?



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5. Find out the chemical names and formulae for the following common household substances.

a) common salt b) baking soda c) washing soda d)  
vinegar



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6. Which has more number of atoms 100 g of sodium or 100 g of iron? Justify your answer.

Atomic mass of sodium =23 u, atomic mass of iron= 56 u)



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## 7. Complete the following table.



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## 8. Fill the following table.

Sl.No.	Name	Symbol/Formula	Molar mass	Number of particles present in molar mass
1	Atomic oxygen		16 g	$6.022 \times 10^{23}$ atoms of oxygen
2	Molecular oxygen			
3	Sodium			
4	Sodium ion		23 g	
5	Sodium chloride			$6.022 \times 10^{23}$ units of sodium chloride
6	Water			



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9. Carbon dioxide is added to 112 g of calcium oxide. The product formed is 200 g of calcium carbonate. Calculate the mass of carbon dioxide used. Which law of chemical combination will govern your answer?



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10. Imagine what would happen if we do not use standard symbols for elements.

(OR)

is it necessary to use symbols for elements? Write your opinion.



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**11.** Draw a diagram to show the experimental setup for the law of conservation of mass.

(OR)

Draw the experimental arrangement used in verifying law of conservation of mass. Write the law of conservation of mass.



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## Question Given In The Lesson

1. Did you observe any precipitate in the reaction ?



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2. Fill in the missing words in the blank spaces in the following statements Cyclone may be caused due to differences in .....



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3. What do you observe from the table? .



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4. What difference do you observe in percentage of copper, carbon and oxygen in two samples? Are elements also made of atoms?



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5. Are elements also made of atoms ?



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6. Fill the blank spaces in the following statements. In india cyclones occur in the month of ..... and.....



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7. Observe the atomicity and fill the following table.



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8. What is valency? Write valency of hydrogen.



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9. Can you write the formula of carbon dioxide and carbon monoxide? Try to write formula for them as we have done in case of water molecule.



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[Previous Summative Assassments Questions 2 Mark](#)

1. Fill in the following table .



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## Previous Summative Assasments Questions 4 Mark

1. Molecular mass of a molecule is the sum of the atomic masses of individual atoms in it.



(i) Find the molecular mass of  $Na_2CO_3$ .

(ii) IF the molecular weight of a compound is 44.

Which is made with carbon and oxygen. What is its molecular formula?

(iii) What is the unit of atomic mass?

(iv) On the basis of molecular weights of NaOH and  $H_2O$ , which is heavier?

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2. Complete the table



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## Essential Material For Examination Purpose 2 Mark

1. What are the Dalton's proposals about the nature of matter ?



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2. What is the proposal of Indian sage Kanada, about atom?



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3. What is the use of symbols for elements?



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4. What are the characteristics of a symbol?



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5. In a reaction 5.3 g of sodium carbonate reacted with 6 g of ethanoic acid. The products were 2.2 g of carbon dioxide , 0.9 g of water and 8.2 g of sodium ethanoate. Show that these observations

are in agreement with law of conservation of mass.



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6. Hydrogen and oxygen combine in the ratio of 1:8 by mass of form water.



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7. IF one moles of carbon atom weight 12 g. What is the mass of 1 atom of carbon?



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8. When 3 g of carbon is burnt in 8g of oxygen 11 g of carbob dioxide is produced. What mass of carbon dioxide is formed when 3 g of carbon is burnt in 50 g of oxygen.



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9. Give the names of the elements present in the following compounds.

(i) quick lime (ii) Hydrogen bromide (iii) Baking soda (iv) Potassium compounds



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**10.** Calculate number of sulphur ( $S_6$ ) present in 16 g of solid sulphur.



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**11.** Anitha wrote the formula for oxygen molecule as 2O. Is it correct or not? Why?



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## Essential Material For Examination Purpose 4 Mark

1. How elements got their names? Explain all examples.



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2. Define the following terms.

Atomicity



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**3.** Define the following terms.

Ions



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**4.** Explain the method of writing a formula to a compound using criss-cross method, with the help of an example.



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**5.** Define the terms : Molecular mass.



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6. Define the terms : Formula unit mass



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7. Define the terms : Mole.



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8. What are the main postulates of Dalton's atomic theory? (OR)

Write the postulates of Dalton's Atomic theory.



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9. what is the defination of incident ray and reflected ray?.



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10. Illustrate the concept of mole through a diagram.



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**11.** How can you appreciate John Dalton for proposing his atomic theory?

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**12.** How do you feel after studying the symbols and formulae of different elements and compounds?

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**13.** Describe the experiment conducted by Joseph L., Proust, which lead him to purpose law of constant proportions.



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**14.** Write down the formulae of these compounds, using criss-cross methods?

sodium oxide



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**15.** Write down the formulae of these compounds,  
using criss-cross methods?

Aluminium chloride



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**16.** Write down the formulae of these compounds,  
using criss-cross methods?

Sodium Sulphide



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17. Write down the formulae of these compounds, using criss-cross methods?

Magnesium hydroxide



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18. Write down the names of compounds represented by the following formulae and also write the anion cation.

(i)  $Al_2(SO_4)_3$  (ii)  $CaCl_2$  (iii)  $K_2SO_4$  (iv)  $KNO_3$

(v)  $CaCO_3$



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19. What are the rules you have to follow while writing a chemical formula?



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20. Calculate the molecular weight

$H_2$ ,  $O_2$ ,  $Cl_2$ ,  $CO_2$ ,  $CH_4$ ,  $C_2H_6$ ,  $C_2H_4$ ,  $NH_3$ ,  $CH_3OH$

.



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21. What is atomicity?



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22. Which mirrors are called spherical mirrors?

how many types are they?



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23. Why do elements have different atomicities?



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## Previous Summative Assessments

1. The correct order in the activity to observe law of conservation of mass is

P. Take 100 ml of silver nitrate solution in a chemical flask and 5 ml of sodium chloride in a test tube.

Q. Due to reaction between these two while precipitate will form.

R. Add sodium chloride solution to silver nitrate solutions

S. Weight of two and record the sum of their weights

T. After reaction weigh it again and it will be equal to the previous reading.

A. P,R,S,Q,T

B. P,S,R,Q,T

C. P,S,Q,R,T

D. P,S,R,T,Q

**Answer: A**



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2. Uma: mass is neither created nor destroyed during a chemical reaction

Rama: matter is conserved in a chemical reaction.

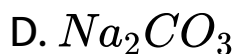
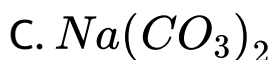
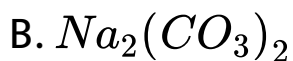
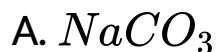
- A. Uma is correct,Rama is incorrect
- B. Both Uma and Rama are correct.
- C. Both uma and rama is incorrect
- D. Uma is incorrect and Rama is correct

**Answer: A**



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3. □ : Sodium chloride ::  $Al_2(SO_4)_3$ : Aluminium sulphate



**Answer: D**



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4. David: By transfer of electrons atoms- can attain octet

Dravid: By sharing of electrons atoms- can attain octet

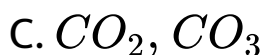
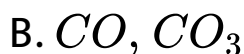
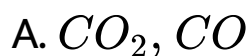
- A. David incorrect, Dravid correct
- B. Both david and dravid are incorrect
- C. Both david and dravid are correct
- D. David correct, dravid incorrect

**Answer: C**



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5. A given chemical substance always contains the same elements combined in a fixed proportion by mass. Guess the compounds formed in the ratio of 1:1 and 1:2 by carbon and oxygen.

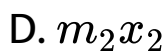
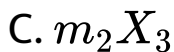
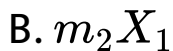
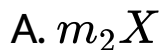


**Answer: D**



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6. A neutral metal atom becomes dipositive ion by losing two electrons. In the same way a neutral non-metal atom becomes uni-negative ion by gaining one electron. The formula of a compound which is formed by these two ions is



**Answer: D**



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7. We can test the law of conservation of mass by the reaction between barium chloride and sodium sulphate. While doing the experiment, one of the precautions you have taken is

A. Reactants should be taken in solid state

B. Cork was not fitted while the reaction is taking place

C. common balance is used to weigh the substances

D. Flask was tilted and swirled for the mixing of two solutions.

**Answer: D**



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8. The apparatus which is not required in the experiment mentioned in question number (8) is

A. Test tube

B. Beaker

C. Stand

D. Conical flask

**Answer: B**



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9. The molecular mass of a substance is the sum of the atomic masses of all the atoms in the molecule of the substance. If the atomic masses of hydrogen, sulphur and oxygen are 1, 32, 16

successively then the molecular mass of sulphuric acid is

A. 98 U

B. 49U

C. 97 U

D. 89 U

**Answer: A**



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**10.** Some symbols of elements are based on their English names, Some other are based on their Latin names. Which of the following elements have symbols based on Latin names?

(i) Sodium (ii) Neon (iii) Gold (iv) Argon

A. (i) and (iii)

B. (i) and (iv)

C. (ii) and (iv)

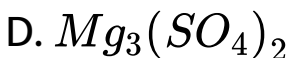
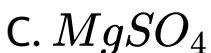
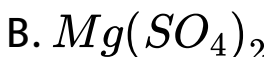
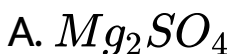
D. (i) and (ii)

**Answer: A**





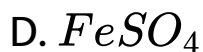
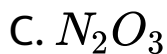
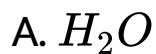
11. IF valency of MG is '+2' and valency of Sulphate ( $SO_4$ ) is '-2', then the formula of compound formed by these



**Answer: A**



12. Homogeneous molecules from the following



**Answer: B**



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13. The common name of hydrogen monoxide is

A. Water

B. Salt

C. Washing soda

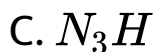
D. Baking soda

**Answer: A**



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14. Valencies of nitrogen and hydrogen are 3 and 1 respectively. The formula of ammonia molecules formed by these two atoms



**Answer: A**



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15. P: the atomicity of Oxygen is 3

Q: The formula of ozone is  $O_2$

A. P-correct,Q-incorrect

B. P-incorrect,Q-correct

C. Both P & Q incorrect

D. Both P & Q correct

**Answer: D**



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16. One of the precautions to be taken in the conduction of experiment on law of conservation of mass is

A. test tube should not be tilted

B. test tube should be tilted

C. Test tube should be immersed in the conical flask

D. Test tube should be kept outside the conical flask

**Answer: B**

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17. Ornaments that we wear contains.....

A. Mercury

B. Sodium

C. Calcium

D. Gold

**Answer: D**



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**18.** The latin name of the element Tungsten is

A. Aurum

B. Plumbum

C. kalium

D. Wolfram

**Answer: D**



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**19.** Molecular formula of Ozone is.....



A.  $O_3$

B.  $O_2$

C. O

D.  $O_8$

**Answer: A**



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**Objective Type Question**

1. When the particles of a substance contain only one type of atoms, that substance is called a/an

A. molecule

B. element

C. compound

D. atom

**Answer:**



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2. Combination of atoms of same elements is known as

A. molecule

B. element

C. compound

D. atom

**Answer: A**



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3. IF atoms of different elements combine then.....  
is formed.

A. molecule

B. element

C. compound

D. atom

**Answer: C**



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#### 4. Symbol of potassium

A. Pb

B. Na

C. Fe

D. K

**Answer: D**



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5. The latin name of the element Tungsten is

A. Natrium

B. Kalium

C. Wolfram

D. Cuprum

**Answer:**



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**6. Correct method of representing a symbol**

A. BE

B. he

C. al

D. Cr

**Answer: D**



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7. Which of the following is octatomic?

A. nitrogen

B. oxygen

C. carbon

D. sulphur

**Answer: D**



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**8. The valency of sulphate is**

A. 2-

B. 2+

C. 3-



D. 3+

**Answer: A**



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9. In  $NH_4Cl$  the cation is

A.  $Cl^-$

B.  $NH_4^+$

C.  $NH_4Cl$

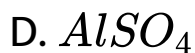
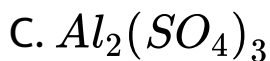
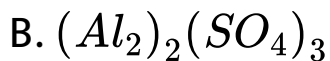
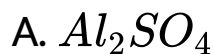
D. None

**Answer:**



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**10.** Chemical formula of aluminium sulphate is



**Answer: C**



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11. Molecular mass of  $H_2SO_4$  is

A. 98 u

B. 89 u

C. 49 u

D. 106 u

**Answer: A**



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12. Molar mass of  $1.5055 \times 10^{23}$  number of calcium atoms

A. 20 gm

B. 40 gm

C. 10 gm

D. 30 gm

**Answer: C**



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13. Convert into moles : 8 gm of Mg.

A. 0.3

B. 3

C. 2

D. 0.2

**Answer:**



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**14.** Among the following which element has more number of atoms?

A. Sulphur

B. Calcium

C. Nitrogen

D. Carbon

**Answer: D**



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15. Mass is neither created nor destroyed during a chemical reaction " This is known as .....

- A. Law of constant proportions
- B. Law of multiple proportions
- C. Law of conservation of mass
- D. Law of conservation of energy

**Answer: C**



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16. Dalton proposed atomic theory based on.....

A. Law of conservation of mass

B. Law of constant proportions

C. Both A & B

D. Neither A nor B

**Answer: C**



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17. According to Dalton atom is .....particle.

A. indivisible

B. tiny

C. both A & B

D. none of these

**Answer: A**



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**18.** The word atom is derived from a Greek word "atmos" means.....

- A. indivisible
- B. divisible
- C. Both A & B
- D. none of these

**Answer: A**



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19. .... are the building blocks of all matter.

A. Atoms

B. Molecules

C. Elements

D. Compounds

**Answer:**



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20. Latin word for water is.....

A. hydro

B. oxy

C. helios

D. none of these

**Answer:**



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**21.** latin word for atom is.....

A. hydro

B. oxy

C. helios

D. atmos

**Answer: D**



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**22. Symbol of Beryllium is.....**

A. Ba

B. Be

C. Br

D. B

**Answer: B**



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**23.** Symbol of nitrogen is.....

A. Ni

B. Na

C. N

D. No

**Answer: C**



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**24.** Symbol for gold.....

A. G

B. Ga

C. Ge

D. Au

**Answer:**



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25.  $Cl_2$  is the formula for.....

- A. Chlorine
- B. Cadmium
- C. Chromium
- D. Calcium

**Answer:**



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26. We are protected by shielding the earth from some harmful rays of the sun by.....

A. atmosphere

B. ozone layer

C. clouds

D. sky

**Answer: B**



27. The number of atoms constituting a molecule is known as its.....

A. valency

B. atomicity

C. atomic number

D. mass number

**Answer: B**



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28. The atomicity of sodium is.....

A. 1

B. 2

C. 3

D. 4

**Answer: B**



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29. The combining capacity of one atoms with another atom is its.....

A. valency

B. atomicity

C. atomic number

D. mass number

**Answer:**



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30. Valency of Argon is.....

A. 0

B. 1

C. 2

D. 3

**Answer:**



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31. Valency of carbon is .....

A. 1

B. 2

C. 3

D. 4

**Answer:**



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**32.** A positively charged ion is called.....

A. radical

B. anion

C. cation

D. multiple ion

**Answer:**



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**33.** A negatively charged ion is called.....

A. radical

B. anion

C. cation

D. multiple ion

**Answer:**



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**34.** In  $NH_4OH$  the anion is.....

A.  $OH^-$

B.  $NH_4^+$

C.  $NH_3^+$



D.  $NH^-$

**Answer:**



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**35.** Standard reference for measuring atomic masses of other elements is .....

A. atomic mass of carbon -12

B. atomic mass of carbon-14

C. atomic mass of oxygen-16

D. atomic mass of oxygen -18

**Answer: A**



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**36.** The number of times one atom of given element is heavier than  $1/12$  th part of atomic mass of carbon-12 is called as.....

A. valency

B. atomicity

C. atomic mass

D. atomic number

**Answer:**



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**37. Atomic mass of Magnesium is.....**

A. 8

B. 10

C. 12

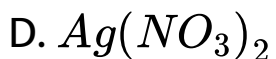
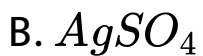
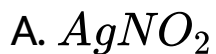
D. 24

**Answer:**



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38. Formula of silver nitrate.....



**Answer:**



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39. Molecular mass of sodium carbonate is.....

U.

A. 108

B. 104

C. 110

D. 106

**Answer:**



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40. Avogadro constant  $N_A = \dots\dots\dots$

A.  $6.022 \times 10^{20}$

B.  $6.022 \times 10^{21}$

C.  $6.022 \times 10^{22}$

D.  $6.022 \times 10^{23}$

**Answer:**



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41. Molar mass of water =  $\dots\dots\dots$  U.

A. 16

B. 18

C. 20

D. 22

**Answer:**



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**42.** Number of particles present in 32 g of oxygen molecule are.....

A.  $6.022 \times 10^{20}$

B.  $3.011 \times 10^{23}$

C.  $6.022 \times 10^{22}$

D.  $6.022 \times 10^{23}$

**Answer:**



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**43.** Convert in to moles:

22 g of carbon dioxide

A. 1

B. 0.25



C. 0.75

D. 0.5

**Answer:**



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**44.** The valency of copper in  $Cu_2O$  is.....

A. +1

B. +2

C. +3

D. - 1

**Answer: A**



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**45.** Number of particles in 7.75 g of phosphorous is.....

A.  $6.022 \times 10^{23}$

B.  $3.011 \times 10^{23}$

C.  $1.5055 \times 10^{23}$

D.  $6.022 \times 10^{22}$

**Answer:**



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**46.** Symbol of nitrate is.....



**Answer:**



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47. Statement -I The symbol of chloride ion is  $Cl^-$ .

Statement -II: The symbol of ammonium ion is  $NH_4^+$ .

- A. Both the statements are true.
- B. Statement-I is true and statement-II is false.
- C. Statement-I is false and statement-II is true
- D. Both the statements are false

**Answer:**



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48. Symbol of sodium ion is.....

A. Na

B.  $Na^{2+}$

C.  $Na^{3+}$

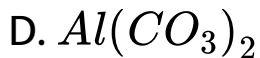
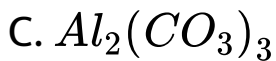
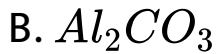
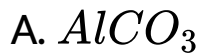
D.  $Na^{+}$

Answer: D



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49. The formula of Aluminium Carbonate is.....



**Answer:**



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50. The symbol of Zinc ion is.....

A. Zn

B.  $Zn^+$

C.  $Zn^{2+}$

D.  $Zn^{3+}$

**Answer:**



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**51.** Which of the following statement is not given by Dalton? Statement (A) : If mass was to be conserved, then all elements must be made up of

extremely small particles. Statement (B) : If law of constant proportion is to be followed, the particles of same substance be either same or different.

A. A only

B. B only

C. Both A & B

D. none

**Answer:**



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**52. Who is correct?**

Srinu: Elements are made up of atoms.

Mohan: Atoms are made of elements.

A. Srinu

B. Mohan

C. Both

D. Neither srinu and mohan

**Answer:**



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53. Assertion (A): The atomic mass of magnesium is 24.

Reason ( R): Magnesium atom is 24 times heavier than that of  $1/12$  of mass of carbon.

A. A and R are true.A is supported by R

B. A and R are true , A is not supported by R

C. A and R are false

D. A is true but R is false

**Answer:**



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**54.** Assertion (A): Atomic mass has no units.

Reason ( R): Atomic mass is an expression of ratio.

A. A and R are true.A is supported by R

B. A and R are true , A is not supported by R

C. A and R are false

D. A is true but R is false

**Answer:**



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55. An iron rod changed into iron oxide by rusting. Guess how the weights before and after rusting of the iron rod are changed.

If  $a$  = weight of the iron rod

$b$  = weight of the iron oxide

A.  $a > b$

B.  $b < a$

C.  $a = b$

D. we cannot say

**Answer:**



56. In the experiment of “To prove law of conservation of mass”, Manoj found that weight of ‘Mg’ in a closed test tube is not equal to the weight of ‘MgO’ after burning. The reason may be

- A. Law of conservation of mass is not applicable to some chemical changes
- B. Some gas was escaped in this experiment
- C. He was used simple balance in weight
- D. Above all

**Answer:**



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57.  $CO : 1 : 1 :: CO_2 : \dots\dots\dots?$

A. 1 : 1

B. 2 : 1

C. 1 : 2

D. 2 : 3

**Answer:**



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58. Molecules in water is  $H_2O$  then molecules in the Hydrogen is

A. H

B.  $H_2$

C. A or B

D. No molecules

**Answer:**



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59. Why did symbol of copper taken as 'Cu'?

A. latin name of copper is cuprum

B. original spelling of copper is cupper

C. Symbols of all metals should be taken in  
two letters

D. Above all

**Answer:**



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**60.** Statement (A) : Symbol of carbon is 'C' whereas symbol of calcium is 'Ca'. Reason (R) : Eventhough carbon and calcium have 'C' as its initial, carbon occurs first in periodic table. So, its symbol was taken as 'C' and calcium symbol was taken as 'Ca'.

- A. Both A and R are true
- B. Both A and R are false
- C. A is true and but R is false
- D. A is false but R is true

**Answer:**



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**61.** Generally all inert gases like , He,Ne,Ar,Kr,Xe are available as monoatomic elements.

Guess the reason.

- A. They are more reactive
- B. Their valency is zero
- C. Their valency is less than 8
- D. They are unstable.

**Answer:**





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62. IF ' $x^{-1}$ ' and Na' $x$ ' then ' $x$ ' may be

A. carbon

B. cromium

C. chlorine

D. copper

Answer:



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63. The valencies of 'Mg' and 'O' are.....respectively in MgO.

A. 1,1

B. 2,2

C. 1,2

D. 2,1

**Answer:**



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64. 'X<sub>2</sub> Y', 'X' H 'Y', 'X' OH

Guess X and Y.

A. X=Na, Y=OH

B. X=Na, Y=CO<sub>3</sub>

C. X = CO<sub>3</sub>, Y=Zn

D. X=Zn, Y= CO<sub>3</sub>

**Answer:**



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65. By using  $Ag^+$ ,  $Cl^-$ ,  $Na^+$ ,  $OH^-$

How many substance can be formed?

A. 2

B. 3

C. 4

D. 6

**Answer:**



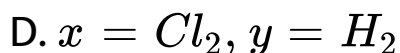
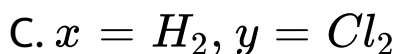
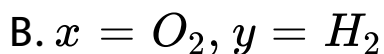
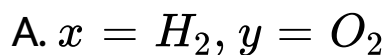
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66. Molar mass of molecule  $x = 2$  gr

Molar mass of molecule  $y = 32$  gr

Molar mass of molecule  $x_2y = 18$  gr

Predict  $x$  and  $y$ .



**Answer:**



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67. No. of molecules in 44 grams of  $CO_2$  is equal to

A. no. of molecules in 18 gr of  $H_2O$

B. no. of molecules in 2 grams of  $H_2$

C. no. of molecules in 32 grams of  $O_2$

D. any one of the above

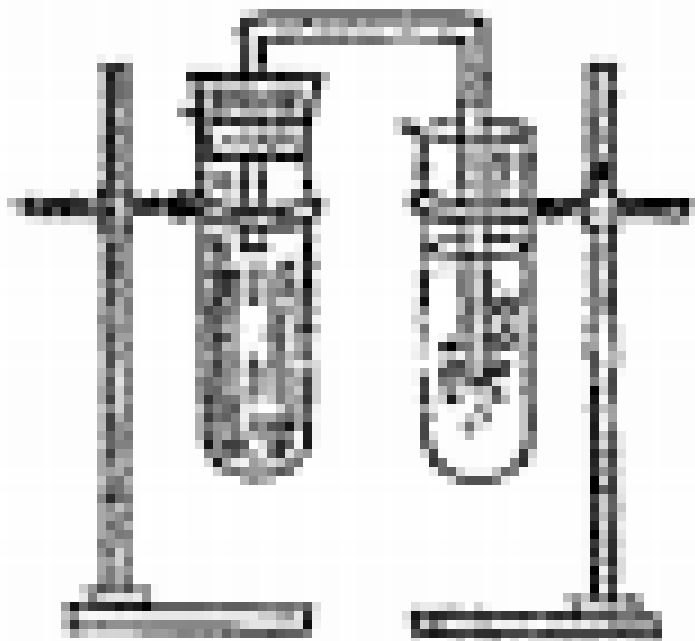
**Answer:**



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68. In this experiment which gas is produced?



A. put the cork tightly

B. measure components accurately

C. while measuring leave the apparatus freely

D. Above all

**Answer:**



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**69.** Law of conservation of mass was proposed by

A. Antoine Lavoisier

B. Joseph L.Proust

C. John dalton

D. Landolt

**Answer:**



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**70.** Law of conservation of mass was experimentally verified by

A. Antoine Lavoisier

B. Joseph L.Proust

C. John dalton

D. Landolt

**Answer:**



Watch Video Solution

71. Law of constant proportions was proposed by

A. Antoine Lavoisier

B. Joseph L.Proust

C. John dalton

D. Landolt

**Answer:**



Watch Video Solution

72. What is the original name of Kanada, an Indian sage, who proposed anu and paramanu?

A. Vaishesika Sutra

B. Rishi

C. Kasyapa

D. Bhaskara

**Answer:**



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**73.** Initial letter of an element written in capitals should represent that a particular element. This was proposed by

- A. John dalton
- B. Landolt
- C. John Berzelius
- D. Wilhelm Ostwald

**Answer:**



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74. The word 'mole' was first introduced by

A. John Berzelius

B. Wilhelm Ostwaid

C. John dalton

D. Avogadro

**Answer:**



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75. Number of particles present in 9 grams of aluminium

A.  $2.007 \times 10^{23}$

B.  $3.011 \times 10^{23}$

C.  $18.066 \times 10^{23}$

D.  $6.022 \times 10^{23}$

**Answer:**



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**76.** Father of modern chemistry is.....

A. Levoisier



B. Proust

C. Dalton

D. Landolt

**Answer:**



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**77.** Greek name of sun is.....

A. hydro

B. oxy

C. helios

D. atmos

**Answer:**



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**78.** The latin name of Mercury is

A. Aurum

B. Cuprum

C. kalium

D. Hydragyrum

**Answer:**



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**79.**  $O_2$  From the given substance select the wrong statement.

- A. It is molecule of oxygen
- B. It has two elements
- C. IT contains two oxygen atoms
- D. Is is not a compound

**Answer:**



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**80.**  $2H_2O$  By using this, select the wrong statement.

- A. The atomicity of water molecule is 6
- B. Water molecule contains 3 atoms
- C. The above indicates 2 molecules of water
- D. It is not exists because of unstable.

**Answer:**



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**81.** Find the odd one according to their net charge of ion.

A. Hydrogen,sodium,potassium

B. Magnesium,calcium,zinc

C. Aluminium,iron,silver

D. Ammoniu,copper,silver

**Answer:**



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82. Antione Lavoisier is appreciable because

A. He proposed the law of conservation of mass

B. He is the father of modern chemistry

C. He proposed the law of constant proportions

D. A and B

**Answer:**



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83. Atomic mass can be measured accurately by using the device.

A. Mass spectrometer

B. Light spectrometer

C. Electronic balance

D. None

**Answer:**



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84. No. of atoms in 16 g of oxygen.

A.  $6.022 \times 10^{23}$

B.  $3.011 \times 10^{23}$

C.  $12.044 \times 10^{23}$

D. None

**Answer:**



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85. In a soda water there is 44 grams of  $CO_2$  is mixed with 18 grams of water. The no. of



molecules of  $H_2CO_3$  (Soda water ) is

A.  $6.022 \times 10^{23}$

B.  $3.011 \times 10^{23}$

C.  $12.044 \times 10^{23}$

D. None

**Answer:**



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**86.** Avogadro is appreciable, because he found that one mole of any substance contains.....

molecules.

A.  $6.2 \times 10^{22}$

B.  $6.4 \times 10^{19}$

C.  $6.02 \times 10^{23}$

D. Countless

**Answer:**



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**87.** The great mole concept was introduced by.....

And he is appreciable.

A. Avogadro

B. Ostwaid

C. Dalton

D. Lavoisier

**Answer:**



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