

Very Short Answer Questions

carrying 1 mark

1. Define Avogadro's law.
2. What is meant by a.m.u. ?
3. Define significant figure.
4. What is a mole ?
5. Define precision.
6. State the law of definite proportions.
7. Define atomic mass of an element.
8. Does a balanced chemical equation obey the law of conservation of mass ?
9. Define molarity of a solution.
10. Express decimal equivalent of $\frac{2}{7}$ to three significant figures.
11. Is the molar volume of NH_3 different from that of CO_2 ?
12. Name a monoatomic gas ? What is its valency ?
13. Define limiting reagent.
14. Write 0.000623 cm in a scientific notation.
15. Define law of multiple proportions.
16. What is gram molecular mass ? Give one example.
17. Give one example each of a molecule in which empirical formula and molecular formula are
(i) same and (ii) different.
18. Define mole in terms of number.
19. Balance the equation :
$$\text{CaF}_2 + \text{H}_2\text{SO}_4 + \text{H}_3\text{BO}_3 \longrightarrow \text{CaSO}_4 + \text{BF}_3 + \text{H}_2\text{O}$$
20. How many atoms of carbon are present in 0.1 mole of $\text{C}_{12}\text{H}_{22}\text{O}_{11}$?
21. How many hydrogen atoms are present in 60 a.m.u. of ethane ?
22. What is meant by one gram of atom of iron ?
23. What is the S.I. unit of density ?
24. Name the law which deals with the ratios of the volumes of the gaseous reactants and products.
25. Which isotope of C is used for expressing relative atomic masses of elements ?
26. An atom of an element is 13 times heavier than the mass of a carbon atom. What is its mass in a.m.u. ?
27. What is the standard for the molecular weights of molecules ?
28. What is the ratio of molar volumes of SO_2 and SO_3 ?
29. State law of reciprocal proportions.

30. What volume
(Density of me

Short Answer

1. What do you compound and case.
2. Explain the ammonia rep
3. Give the SI
(iii) force.
4. What do you formula and related to ea
5. Define molar carbonate m
6. Classify the mixtures :
(i) Water (ii)
(vii) sulphur
(x) gasoline.
7. What are hor
Which of the
(a) tap water
8. When two su
a pestel and
and a new su
different fro
or a mixture
9. State the fol
(i) atomic ma
volume.
10. How would y
(i) iodine fr
(ii) sulphur
11. State Avogad
given suppor
12. How can you
the help of A
13. State the foll
give one exam
(i) Law of c
(ii) Law of r

1. What do you understand by the terms element, compound and mixture? Give two examples in each case.
2. Explain the term mole. What does one mole of ammonia represent?
3. Give the SI units for (i) volume (ii) speed and (iii) force.
4. What do you understand by the terms (i) empirical formula and (ii) molecular formula? How are they related to each other? Illustrate with an example.
5. Define molarity. What does 1 M solution of sodium carbonate mean?
6. Classify the following into elements, compounds or mixtures :
(i) Water (ii) milk (iii) tea (iv) iron (v) sugar (vi) smoke (vii) sulphur (viii) 22 carat gold (ix) iodised table salt (x) gasoline.
7. What are homogeneous and heterogeneous mixtures? Which of the following are homogeneous?
(a) tap water (b) wood (c) soil (d) smoke (e) cloud.
8. When two substances A and B are mixed together in a pestle and mortar, a large amount of heat is evolved and a new substance C is formed. C has the properties different from A and B. Is C an element, compound or a mixture?
9. State the following :
(i) atomic mass (ii) gram atomic mass (iii) gram molar volume.
10. How would you recover
(i) iodine from a mixture of iodine and salt?
(ii) sulphur from a mixture of carbon and sulphur?
11. State Avogadro's hypothesis. In what way, has it given support to Dalton atomic theory?
12. How can you deduce the atomicity of hydrogen with the help of Avogadro's hypothesis?
13. State the following laws of chemical combination and give one example in each case
(i) Law of constant composition.
(ii) Law of multiple proportions.

18. Ba

(i)

(ii)

(iii)

19. W

Ha

20. W

(ii)

(a)

(b)

(c)

(d)



Lo

1. S

va

2. W

3. W

O

cl

4. W

(i)

(ii)

5. H

(i)

(ii)

6. C

7. W

(a)

(b)

(c)

(d)

(e)

(f)

(g)

(h)

(i)

(j)

(k)

(l)

(m)

(n)

(o)

(p)

(q)

(r)

(s)

(t)

(u)

(v)

(w)

(x)

(y)

(z)



14. What do you understand by a balanced chemical equation? What quantitative information does a balanced chemical equation convey?

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15. Explain (i) molarity (ii) limiting reagent.

10

16. Write the balanced chemical equations for the following reactions:

(i) Manganese dioxide and concentrated hydrochloric acid.

(ii) Sodium thiosulphate and iodine.

(iii) Copper and dilute nitric acid.

(iv) Sulphur dioxide and hydrogen sulphide.

17. Write the empirical formulae of the compounds having the following molecular formulae:

1

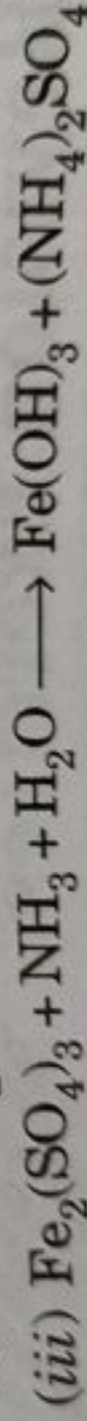
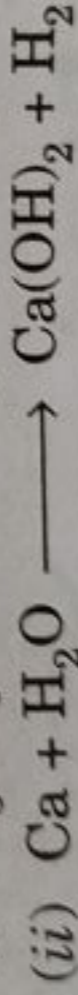
(i) C_6H_6 (ii) C_6H_{12} (iii) H_2O_2 (iv) H_2O

(v) Na_2CO_3 (vi) B_2H_6 (vii) N_2O_4

18. Balance the following equations:



2



19. What do you understand by the term formula mass? How does it differ from molecular mass?

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20. Which of the following has (i) maximum (ii) minimum mass?

(a) 1 gram atom of C

(b) 1 a.m.u. of an atom

(c) 1 gram mole of sulphur dioxide

(d) 6.02×10^{20} atoms of nitrogen.