

1. Two students performed the same experiment separately and each one of them recorded two readings of mass which are given below. Correct reading of mass is 3.0 g. On the basis of given data, mark the correct option out of the following statements:

Students	Reading	
	(i)	(ii)
A	3.01	2.99
B	3.05	2.95

- (i) Results of both the two students are neither accurate nor precise.
 (ii) Results of student A are both precise and accurate.
 (iii) Results of student B are neither precise nor accurate.
 (iv) Results of student B are both precise and accurate. A

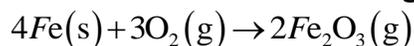
2. A measured temperature on Fahrenheit scale is $200^{\circ}F$. What will this reading be on Celsius scale?

- (i) $40^{\circ}C$ (ii) $94^{\circ}C$ (iii) $93.3^{\circ}C$ (iv) $30^{\circ}C$

3. Which of the following statements about a compound is incorrect?

- (i) A molecule of a compound has atoms of different elements.
 (ii) A compound can not be separated into its constituent elements by physical methods of separation.
 (iii) A compound retains the physical properties of its constituent elements.
 (iv) The ratio of atoms of different elements in a compound is fixed.

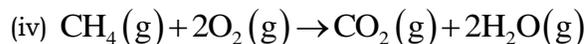
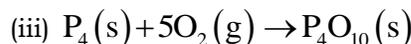
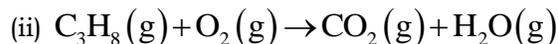
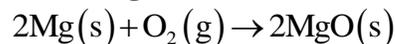
4. Which of the following statements is correct about the reaction given below?



- (i) Total mass of iron and oxygen in reactants = total mass of iron and oxygen in product therefore it follows law of conservation of mass.
 (ii) Total mass of reactants = total mass of product, therefore, law of conservation of mass.
 (iii) Amount of Fe_2O_3 can be increased by taking any one of the reactants (iron or oxygen) in excess.

- (iv) Amount of Fe_2O_3 produced will decrease if the amount of any one of the reactants (iron or oxygen) is taken in excess. A

5. Which of the following reactions is not correct according to the law of conservation of mass? (i)



6. How many significant figures should be present in the answer of the following calculations.

$$\frac{2.5 \times 1.25 \times 3.5}{2.01}$$

2.01

7. Which of the following is not a mixture?

- a) Gasoline
 b) Distilled alcohol
 c) LPG
 d) Iodized table salt

8. How many significant figures are there in (respectively) (1) 73.000g (2) 0.0503g and (3) 2.001 s?

- a) 3,3,4 b) 3,4,5
 c) 2,5,4 d) 5,3,4

9. Which one of the following set of units represents the smallest and largest amount of energy respectively?

- a) J and erg b) erg and cal
 c) Cal and eV d) SeV and L-atm

10. The smallest matter particle that can take part in chemical reaction is

- a) Atom
 b) Molecule
 c) Both (a) and (b) d) None of these

11. The solid like conducting state of gases with free electrons is called

- a) Sol state b) Gel state
 c) Plasma state d) All of these

12. The least count of an instrument is 0.01 cm. Taking all precautions, the most possible error in the measurement can be

- a) 0.005cm b) 0.01cm c) 0.0001 cm d) 0.1 cm

13. Which has the highest weight?

- a) $1 m^3$ of water b) A normal adult man
 c) 10 L of Hg d) All have same weight

14. One gram mole of a gas at NTP occupies 22.4

L. This fact was derived from

- a) Law of gaseous volumes
- b) Avogadro's hypothesis
- c) Berzelius hypothesis
- d) Dalton's atomic theory

15. An example of homogeneous mixture is

- a) Mixture of soil and water
- b) Mixture of salt and sand grains
- c) Sugar solution
- d) None of the above

16. 0.003924 have significant figures.

- a) 6 b) 4 c) 3 d) 7

17. Which property of an element is always a whole number?

- a) Atomic volume
- b) Atomic weight
- c) Atomic number
- d) Equivalent weight

18. In multiplication and division, the significant figures of answer must be same as that in the quantity with Number of significant figures.

- a) Maximum b) 3 c) 2 d) Minimum

19. Matter is anything which occupies . . . A . . . and has . . . B . . . Here A and B are

- a) Density and mass
- b) Volume and mass
- c) Space and mass
- d) None of these

20. In which of the following numbers all zeros are significant?

- a) 0.500 B) 30.000 C) 0.00030 D) 0.0050

21. A signature written with carbon pencil weighs 1 mg. what is the number of carbon atoms present in the signature?

- a) 6.02×10^{20} B) 0.502×10^{20}
- C) 5.02×10^{23} D) 5.02×10^{20}

22. Law of constant composition is same as the law of

- a) Conservation of mass
- b) Conservation of energy
- c) Multiple proportion
- d) Definite proportion

23. Camphor is often used in molecular mass determination because

- a) It is readily available
- b) It has a very high cryoscopic constant
- c) It is volatile
- d) It is solvent for organic substances

24. Assertion (A): Significant figures for 0.200 is 3 where as for 200 it is 1. Reason (R) Zero at

the end or right of a number are significant provided they are not on the right side or the decimal point.

- (i) Both A and R are true and R is correct explanation of A.
- (ii) Both A and R are true but R is the correct explanation of A.
- (iii) A is true but R is false.
- (iv) Both A and R are false.

25. Assertion (A): combustion of 16 g of methane gives 18g of water. Reason (R): In the combustion of methane, water is one of the products.

- (i) Both A and R are true but R is not the correct explanation of A.
- (ii) A is true R is false.
- (iii) A is false but R is true.
- (iv) Both A and R are false.

26. Assertion (A): One atomic mass unit is defined as one twelfth of the mass of one carbon - 12 atom. Reason (R): Carbon - 12 isotope is the most abundant isotope of carbon and has been chosen as standard.

- (i) Both A and R are true and R is the correct explanation of A.
- (ii) Both A and R are true but R is not the correct explanation of A.
- (iii) A is true but R is false.
- (iv) Both A and R are false.

27. Write the following physical quantities with units:

Physical quantity	Unit
(i) length	(a)
(ii) time	(b)
(iii) Mole	(c)
(iv) area	(d)
(v) Pressure	(e)
(vi) Luminous intensity	(f)
(vii) Density	(g)
(viii) Mass	(h)
	(i)