SURAJ SCHOOL

SURAJ EDUCATION

Holidays Homework

CLASS - 11th Medical

English

Prepare all these in a A4 size sheet and compile them in a file.

Q.1 Write **Notices** on the following occasions **(three of each category)**

a. Tours
b. Sports
c. Cultural/Extra-curricular activities
d. Lost & Found
e. Appeals

Q.2. Write **Formal letters** on the following topics **(Two of each category)**

a. Complaint
b. Editor
c. Placing order
d. Enquiry
e. Job Application

Q.3 Write **Articles** on the following topics (**Do no any 2 topics)**

a. My vision of future India
b. Digital education in India
c. Women safety in India
d. 50-years of Earth Day

Q.4 Read all the poems and Write down their ***Poetic Devices,Summary and Theme***.

Hope you all have a great holiday and make sure to keep yourself safe.👍☺👍

Physical Education

Q- Define Physical education and explain it's aim and objectives in detail.

Q- Elaborate the ' khelo India programme in detail.

Q- what are the career option in physical education?

Q- Explain the origin of Ancient Olympic Game and modern Olympic games

Q- write short note on:

(i) Olympic motto
(ii) Olympic flag
(iii) Olympic flame

Q- Anyone one IOA recognized sports/Game of choice. Labelled diagram of field and equipment. Also mention it's rules, Terminologies and skills.

Physics

Q1.State the number of significant figures in the following: (a) 0.007 m2 (b) 2.64 x 104 kg (c) 0.2370 g cm-3 (d) 6.320 J (e) 6.032 N m-2 (f) 0.0006032

Q2.Two trains A and B of length 400 m each are moving on two parallel tracks with a uniform speed of 71 km h-1 in the same direction, with A ahead of B. The driver of B decides to overtake A and accelerates by 1 ms-1. If after 50 s, the guard of B just brushes past the driver of A, what was the original distance between them?

Q3.A player throws a ball upwards with an initial speed of 29.4 ms-1. (a) What is the direction of acceleration during the upward motion of the ball? (b) What are the velocity and acceleration of the ball at the highest point of its motion? (c) Choose the x = 0 m and t = 0 s to be the location and time of the ball at its highest point, vertically downward direction to be the positive direction of xaxis, and give the signs of position, velocity and acceleration of the ball during its upward, and downward motion. (d) To what height does the ball rise and after how long does the ball return to the player's hands?

Q4. The ceiling of a long hall is 25 m high. What is the maximum horizontal distance that a ball thrown with a speed of 40 m s-1 can go without hitting the ceiling of the hall?

Q5. A body of mass 0.40 kg moving initially with a constant speed of 10 ms-1 to the north is subject to aconstant force of 8.0 N directed towards the south for 30 s. Take the instant the force is applied to be t = 0, the position of the body at that time to be x = 0, and predict its position at t = -5 s, 25 s, 100 Q5.h a uniform speed of 10 ms-1. (b) downwards with a uniform acceleration of 5 ms-2. (c) upwards with a uniform acceleration of 5 ms-2. S. What would be the readings on the scale in each case? (d) What would be the reading if the lift mechanism failed and it hurtled down freely under gravity?

Q6 Drive formula of time of flight, maximum height and range in projectile motion.

Q7. Explain friction and its graph with applied force.

Q8.Two bodies of masses 10 kg and 20 kg respectively kept on a smooth, horizontal surface are tied to the ends of a tight string. A horizontal force F = 600 N is applied to (i) A, (ii) B along the direction of string. What is the tension in the string in each case?

Biology

1. Draw a well labelled diagram if plant cell, animal cell, nucleus, mitochondria, flagella, centrosome.
2. Write a short note on ER, Plastids, lysosomes, vacuoles.
3. Differentiate between Mitosis & Meiosis.
4. Differentiate between cell wall & plasma membrane.
5. Explain active & passive transport.
6. Explain Prophase-1 of meiosis-I.
7. How anaphase of mitosis is different from anaphase of meiosis-I.
8. Explain the significances of mitosis & meiosis.

Name :.....

SURAJ Group of Schools

SURAJ EDUCATION

Class: XI

Subject: Chemistry

1. Number of HCl molecules present in 10 mL of 0.1 M solution is :

(1) 6.022×10^{23} (2) 6.023×10^{22}

(3) 6.022×10^{21} (4) 6.022×10^{20}

2. The volume of a gas at 0°C and 700 mm pressure is 760 cc. The no. of molecules present in this volume is

(1) 1.88×10^{22} (2) 6.022×10^{23}

(3) 18.8×10^{23} (4) 18.8×10^{22}

3. The number of moles of carbon dioxide which contain 8 g of oxygen is –

(1) 0.5 mole (2) 0.20 mole

(3) 0.40 mole (4) 0.25 mole

4. If 224 mL of a triatomic gas has a mass of 1g at 273 K and 1 atm pressure, then the mass of one atom is –

(1) 8.30×10^{-23} g (2) 2.08×10^{-23} g

(3) 5.53×10^{-23} g (4) 6.24×10^{-23} g

5. The maximum number of molecules are present in

(1) 5 L of N_2 gas at STP

(2) 0·5 g of H_2 gas

(3) 10 g of O_2 gas

(4) 15 L of H_2 gas at STP

6. How many moles of magnesium phosphate, $Mg_3(PO_4)_2$ will contain 0.25 mol of oxygen atoms?

(1) 2.5×10^{-2} (2) 0.02

(3) 3.125×10^{-2} (4) 1.25×10^{-2}

7. 22.4 L of water vapour at NTP, When condensed to water occupies an approximate volume of -

(1) 18 L (2) 1 L

(3) 1 mL (4) 18 mL

8. 0.01 mol of iodoform (CHI_3) reacts with Ag to produce a gas whose volume at NTP is

$$2CHI_3 + 6Ag \rightarrow C_2H_2 + 6AgI(s)$$

(1) 224 mL (2) 112 mL

(3) 336 mL (4) None of these

9. The minimum quantity in grams of H_2S needed to precipitate 63.5 g of Cu^{2+} will be nearly :

$$Cu^{+2} + H_2S \rightarrow CuS + H_2$$

(1) 63.5 g (2) 31.75 g

(3) 34 g (4) 20 g

10. 2.76 g of silver carbonate on being strongly heated yields a residue weighing –

$$Ag_2CO_3 \rightarrow 2Ag + CO_2 + \tfrac{1}{2}O_2$$

(1) 2.16 g (2) 2.48 g (3) 2.32 g (4) 2.64 g

11. The volume of gas at NTP produced by 100 g of CaC_2 with water is :-

$$CaC_2 + 2H_2O \rightarrow Ca(OH)_2 + C_2H_2$$

(1) 70 L (2) 35 L (3) 17.5 L (4) 22.4 L

12. Element 'A' reacts with oxygen to form a compound A_2O_3. If 0.359 g of 'A' reacts to give 0.559 g of the compound, then atomic weight of 'A' will be :–

(1) 51 (2) 43.08 (3) 49.7 (4) 47.9

13. $CaCO_3$ is 90% pure. Volume of CO_2 collected at STP when 10 g of $CaCO_3$ is decomposed is -

(1) 2.016 L (2) 1.008 L

(3) 10.08 L (4) 20.16 L

14. 50 g $CaCO_3$ will react with ..... g of 20% pure HCl by weight .

(1) 36.5 g (2) 73 g (3) 109.5 g (4) 182.5 g

15. Two oxides of a metal contains 50% and 40% of the metal respectively. The formula of the first oxide is MO. Then the formula of the second oxide is

(1) MO_2 (2) M_2O_3 (3) M_2O (4) M_2O_5

16. A gas mixture of 3 L of propane and butane on complete combustion at 25°C produces 10 L of CO_2. Initial composition of the propane & butane in the gas mixture is –

(1) 66.67%, 33.33% (2) 33.33%, 66.67%
(3) 50%, 50% (4) 60%, 40%

17. The atomic mass of an element is 27. If valency is 3, the vapour density of the volatile chloride will be:-

(1) 66.75 (2) 6.675 (3) 667.5 (4) 81

18. 1 L of a hydrocarbon weighs as much as 1 Lof CO_2 under similar conditions. Then the molecular formula of the hydrocarbon is -

(1) C_3H_8 (2) C_2H_6
(3) C_2H_4 (4) C_3H_6

19. There are two oxides of sulphur. They contain 50% and 60% of oxygen respectively by weight. The weight of sulphur which combine with 1 g of oxygen is in the ratio of -

(1) 1 : 1 (2) 2 : 1
(3) 2 : 3 (4) 3 : 2

20. Perecentage composition of an organic compound is as follows :

C=10.06, H=0.84 , Cl=89.10

Which of the following corresponds to its molecular formula if the vapour density is 60.0

(1) CH_2Cl_2 (2) $CHCl_3$
(3) CH_3Cl (4) None

21. The ratio of masses of oxygen and nitrogen in a particular gaseous mixture is 1 : 4. The ratio of number of molecules is :

(1) 1 : 8 (2) 3 : 16
(3) 1 : 4 (4) 7 : 32

22. A gaseous hydrocarbon on combustion gives 0.72 g of water and 3.08 g of CO_2. The empirical formula of the hydrocarbon is

(1) C_2H_4 (2) C_3H_4
(3) C_6H_6 (4) C_7H_8

23. What volume of oxygen gas (O_2) measured at 0°C and 1 atm, is needed to burn completely 1L of propane gas (C_3H_8) measured under the same conditions:-

(1) 5 L (2) 10 L
(3) 7 L (4) 6 L

24. Volume occupied by one molecule of water (density =1 gcm^{-3}) is :-

(1) 3.0×10^{-23} cm^3 (2) 5.5×10^{-23} cm^3
(3 9.0×10^{-23} cm^3 (4) 6.023×10^{-23} cm^3

25. How many moles of lead (II) chloride will be formed from a reaction between 6.5 g of PbO and 3.2 g of HCl ? (Atomic wt. of Pb=207)

(1) 0.011 (2) 0.029
(3) 0.044 (4) 0.333

26. The percentage of oxygen in ethanol is

(1) 13.13% (2) 34.73%
(3) 60% (4) 75%

27. Empirical formula of a compound is

(1) Whole number ratio of various atoms present in compound.
(2) Contain exact number of different types of atoms present in a molecule.
(3) Simplest whole number ratio of various atoms present in a compound.
(4) None of these

28. A compound contains 6.72% hydrogen, 40% carbon and 53.28% oxygen, its molecular mass is 180.18 g mol^{-1} then molecular formula of compound is :-

(1) $C_2H_2O_4$ (2) $C_2H_4O_{12}$
(3) $C_6H_6O_{12}$ (4) $C_6H_{12}O_6$

29. When gases combine or are produced in a chemical reaction they do so in a simple ratio by volume provided all gases are at same temperature and pressure. This law is known as -

(1) Dalton's Law (2) Gay Lussac's Law
(3) Avogadro's Law (4) Law of Lavoisier