

## **TEST – 2 (Science IX 60mks)**

### **SECTION A (Chemistry 20mks)**

1. What are the two laws of chemical combination? 2
2. What postulates did Bohr gave to support Rutherfords atomic model? 2
3. What is a molecule? What is the diff between a molecule of an element and that of a compound? 2
4. What is atomicity of any molecule? Calculate atomicity for Water & Ozone. 2
5. The average atomic mass of an element A is 16.2u. What are the percentages of isotopes  $^{16}\text{A}_8$  &  $^{18}\text{A}_8$  in the sample? 2
6. Calculate the no of molecules of sulphur present in 48g sulphur. 2
7. Write chemical formulas for 2
  - a. Aluminium chloride
  - b. Copper nitrate
8. What were the most significant observations made by Rutherford in his gold foil experiment? What did he conclude from them? 3
9. Draw the atomic structure of Oxygen, Silicon and Chlorine. 3

### **SECTION B (Physics 25mks)**

10. State Archemedies principle. 2
11. Define 1 Joule of work. State condition when work done is negative 2
12. State the law of conservation of energy. Discuss in brief the energy conversion that takes place when an object falls from a certain height 2
13. Calculate the kinetic energy of an object of mass 5Kg moving with a velocity of 30Km/hr. Report answer in Joules. 2
14. Define wavelength and time period. 2
15. What is echo? Calculate min distance required to hear an echo. 2
16. What is sound? How do sound propagates. Explain briefly with a diagram. 3

17. Calculate the work required to be done to increase the velocity of a car from 36Km/hr to 72Km/hr. Given mass of car is 1500Kg. 5
18. A boy of mass 50Kg runs up a stair case of 45 steps in 9s. if the height of each step is 15cm. find his power. Take value of  $g=10\text{ms}^{-1}$  5
- “OR”

An electric bulb of 60W is used for 6h per day. Calculate the ‘units’ of energy consumed in one day by the bulb. Also compute the total energy consumption in KWh for 1 week.

### SECTION C (Biology 15mks)

19. What is the basis of classification of various living organisms? Also name the diff kingdoms. 2
20. Give two characteristics of each of the following: 5
- a. Monera
  - b. Fungi
  - c. Pteridophyta
  - d. Coelentrata
  - e. Protochordates
21. Write characteristics of vertebrates. Also mention their subclasses. 5
22. Define phanerogams. 1
23. What are different means by which infectious diseases spread? 1
24. What is immunisation? 1