

**Class – IX**  
**Science**

Time: 2½ hrs.  
60

M.M.

**Section - A**

1. What is echo?  
(1)
2. Define the term 'Momentum'.  
(1)
3. Which method can be used to separate a mixture of naphthalene & common salt? (1)
4. What is the numerical value of Avogadro number?  
(1)
5. What do you understand by the terms loudness & timbre?  
(2)
6. What is weight? How is it different from mass? Give two differences.  
(2)
7. Define the mass number of an element. Name the particles that actually determine the mass of an atom.  
(2)
8. Graphite is used for making electrode in a dry cell. Why?  
(2)

**OR**

Which produces more severe burns: boiling water or steam? Why?

9. If 1g of SO<sub>2</sub> contains 'x' molecules, what will be the number of molecules in 1g of CH<sub>4</sub>? (3)
10. What are isotopes? What are radioactive isotopes? Give any 2 uses of radioactive isotopes. (3)
11. What is evaporation? State 2 factors that affect evaporation. Why does a desert cooler cool better on a hot dry day?  
(3)
12. What is buoyant force? What is buoyancy? Give two factors on which it depends. (3)
13. A car is traveling at a speed of 36 Km/hr. A force acts upon the car so that it acquires a velocity of 90km/hr in 6 sec. Calculate the work done and the force applied on the car. (3)
14. What is motion? What are types of motion? Define them with one example each. (3)
15. How is water purified & supplied on a large scale at water works? Explain with diagram. (5)

**OR**

Define 'solution', 'suspension' & 'colloid'. Give 2 characteristics & 2 examples of each.

16. What is wave motion? What is sound? Give the audible frequency range for the human beings. What are Ultrasounds? Mention any two uses of ultrasound. (5)

OR

What are sound waves? How do they travel in air? How can a human being hear the sound? Explain.

**Section B**

17. What is apiculture? (1)
18. Name any two biogeochemical cycles. (1)
19. What are congenital & acquired diseases? Give one example of each. (2)
20. Give two differences between RBC's and WBC's. (2)
21. Differentiate between hypo tonic, hypersonic & isotonic solutions. (3)
22. Write three each of 'aquatic adaptations' and 'volant (aerial) adaptations'. (3)
23. Write three distinctions between monocots & dicots. Give one example of each. (3)

OR

Who proposed binomial nomenclature? What is the importance of binomial nomenclature?

24. Write 5 differences between mixed cropping and intercropping. (5)

OR

What is artificial insemination? Name a center located in India for this purpose. What precautions must be taken during it? What are its advantages? Name any two improved breeds of cows developed in India.