

SCIENCE IX

TIME : 3 hrs.

M.M. 60

- Questions 1, 2, 9, 10, 17, 18 carries 1 marks.
- Questions 3, 4, 11, 12, 19, 20 to 10 carries 2 marks.
- Questions 5 to 7, 13 to 15, 21 to 23 carries 3 marks.
- Questions 8, 16, 24 carries 5 marks.

SECTION-A CHEMISTRY

1. Which separation technique will you apply to separate iron pins from sand?
2. Who discover neutron?
3. State the various applications of the isotopes?
4. What is the difference between mixture and compound?
5. What is colloid? What are its properties?
6. calculates number of particles in following:-
 - a) 64 g of Na
 - b) 3 moles of nitrogen atoms
7. a) write the electronic configuration of element Z=15
b) What is the molar mass of:-
 - 1) Nitric acid
 - 2) Sulphuric acid
8. give reasons:-
 - a) Evaporation cause cooling
 - b) Water at room temperature is liquid
 - c) Perfume can be smelt sitting several meters away

SECTION-B PHYSICS

9. When a carpet is beaten with stick dust comes out of it. Why?
10. What is acceleration of free falling body?
11. a) What is potential energy?
b) When bulb is lighted what type of energy changes take place?
12. An echo returns in 4 seconds. What is the distance of the reflecting substance from source? Assume the speed of sound be 340m/s?
13. a) Explain how bats use ultrasound to catch it's pray?
b) Give 2 examples where Newton's third law of motions can be seen?
14. State universal law of gravitation? Derive the relation to find the force between 2 objects placed at distance "r"?
15. What is work? Calculate the work required to be done to stop a car of 1500 kb moving at a velocity of 60 km/h?
16. a) How can you say that sound waves are longitudinal?
b) Show that the weight of an object will be 1/6 the weight of an object on earth?

SECTION C

17. How many chromosomes are there in eukaryotic cell?
18. Abbreviate AIDS?

19. Why are lysosomes known as suicide bags?
20. Draw a diagram of neuron?
21. state the functions of following
 - a) Smooth muscle
 - b) Cardiac muscle
 - c) Striated muscle
22. What are the major divisions of plantae? What is basis of this division?
23. What is immunization? How it is done? Name two diseases in which the immunization is not possible?
24. Explain the nitrogen cycle in detail?