SAMPLE PAPER II

CLASS - 9 SCIENCE

Half Yearly Examination

General Instructions:-

1. All questions are compulsory

2. The question paper consists of two sections A and B. You are to attempt both the sections

3. There is no overall choice. However intended choice has been given in some questions. You are to attempt only one question in such question.

4. Question 1 to 6 in section A and 19 to 21 in section B are very short answer questions of 1 mark each

5. Question no 7 to 12 in section A and 22 to 24 are short answer questions of 2 marks each

6. Question no 13 to 16 in section A and 25 to 26 are also short answer question carrying 3 marks each.

7. Question no 17 and 18 in section A and 27 are long answer question carrying 5 marks each.

SECTION A

Q 1. What is the Physical state of water as 25˚ C?

Q 2. Which of the following will show "Tyndall effects"? (a) Salt solution (b) Milk (c) $CuSo_4$ (d) Starch solution

Q 3. Under what condition(s) is the magnitude of average velocity of an object equal to it average speed?

Q 4. In what direction does the buoyant force on an object immersed in a liquid act?

Q 5. What are polyatomic ions?

Q 6. Why some of the leaves detached from a tree if we vigorously shake its branches?

Q 7. State Newton first law of motion.

Q 8. What is the importance of universal law of gravitation?

Q 9. What are the differences between uniform & non-uniform motion?

Q10. Give the name of elements present in the following: (a) Quick lime (b) Hydrogen Bromide.

Q11. What do you mean by Buoyancy?

Q12. What is the mass of 4 Moles of Aluminum atoms (Atomic mass of Al=27)?

Q13. A car falls of a ledge and drops to the ground in 0.5 sec (Take g=10 m/sec)

a. What is the speed on striking the ground?
b. What is the average speed during 0.5 sec?
c. How high is the ledge from the ground?

Q14. A Truck starts from rest and rolls down a hill with constant acceleration. It travels a distance of 400 m in 20 sec. Find its acceleration. Find the force acting on it if its mass is 7 metric tones.

Q15. List any three points of difference between homogeneous and heterogeneous mixture.

Q16. Which separation technique will you apply for the separation of the following.

a. Sodium Chloride from its solution in water.
b. Iron pins from sand
c. Oil from water

Q17. i. If action is always equal to reaction, explain how a horse can pull a cart.
ii. A racing car has uniform acceleration of 4m/sec. What distance will it cover in 10 sec after start?

OR

a. Using a Horizontal force of 200 N, we intend to move a wooden cabinet a across a floor at

a constant velocity. What is the frictional force that will be exerted on the cabinet?

b. A large Truck and a car, both moving with a velocity of magnitude v, have a head on collision and both of them come to halt, after that if the collision lasts for one second.

i. Which vehicle experiences the greater force of impact?
ii. Which vehicle experiences the greater acceleration?
iii. Why is the car likely to suffer more damage than truck?

Q18. How are solution and suspension different from one another on basis of there?

i. Diffusion
ii. Appearance
iii. Visibility
iv. Particle size
v. Tyndal effect

OR

a. Why the smell of hot sizzling food reaches you several meters away but to get the smell from the cold food you have to go close?
b. Why we are able to sip hot tea or milk faster from saucer rather than a cup?
c. Suggest a method to liquefy atmospheric gasses.

SECTION B

Q19. State any two conditions essential for good health.

Q20. Which division among the plants has simplest organisms?

Q21. Who discovered cell and when?

Q22. Write the name of causative organisms of following:
(a) Rabies (b) Typhoid (c) Tuberculosis (d) Malaria

Q23. Write any two difference s between prokaryotic and eukaryotic cell.

Q24. How many types of elements together make xylem tissue? Name them.

Q25. Write the functions of the following organelle

i. Mitochondria ii. Cell wall iii Ribosome

Q26. Diagrammatically show difference between three types of muscle fibers

Q27. a) Which do you think is more basic characteristic for classifying organism?

i. The place where they live
ii. The kind of cells they are made of. Why?

b) What are the differences between the animals belonging to the Aves group or those in the Mammalian group? (Any three)

OR

a. Who devised Binomial nomenclature? Give the scientific name of Mango.
b. Differentiate between Parenchyma, Collenchymas and Sclerenchyma on the basis of their shape and cell wall.