SUMMATIVE ASSESSMENT – I, 2017 **SCIENCE** **Class – IX**

Time Allowed: 3 hours **Maximum Marks: 80**

Section - A

1. A book is placed on a table. Write the forces acting on the book. [1]
2. What happens to the melting point of solid with increase in pressure? [1]
3. What is weightlessness? When do objects experience weightlessness? [2]
4. What is the difference between a gas and a vapour? [2]
5. What do you mean by plasmolysis? [2]
6. Mention three points to justify that air is a mixture not a compound. [3]
7. Draw a distance-time graph for [3]
   (i) An object moving with a uniform velocity
   (ii) An object is at rest.
8. How will the weight of a body of mass 100 kg change if it is taken from equator to the poles? [3]
   Give reasons.
9. Describe the phenomenon of membrane biogenesis. Give one function of endoplastic reticulum? [3]
10. Draw a diagrammatic labelled sketch of stem-tip to show the location of meristematic tissue.[3]
    Mention the functions of different types of merismatic tissue.
11. If 10 gm of common salt is dissolved in 364 gm of water. What will be the concentration of the solution? [3]
12. Carbon dioxide was taken in an enclosed cylinder and compressed by applying pressure. [3]
    (i) Which state of matter will be obtained after completion of the process?
    (ii) Define the process.
    (iii) What is the common name of the product obtained in the above process?
13. (i) What is organic farming?
    (ii) List any three methods for insect pest control. [3]
14. State the law of inertia. Why do we fall in forward direction, if a moving bus stops suddenly and fall in backward direction if it suddenly accelerates from rest? [3]
15. What happens to the magnitude of the force of gravitation between two objects if [3]
    (i) distance between the object is tripled.
    (ii) Mass of both the objects is doubled.
    (iii) Mass of both the objects as well as the distance between them is doubled.

16. Distinguish among true solution, suspension and colloid in the tabular form under the following characteristics:- [5]
(i) Type of mixture
(ii) Stability
(iii) Filterability
(iv) Size of the solute
(v) Visibility of particles

17. Draw a velocity versus time graph for a body that starts to move with velocity 'u' under a constant acceleration 'a' for time 't'. Using this graph, derive an expression for distance covered 's' in time 't'. [5]

18. Distinguish between balanced and unbalanced gorces. Explain the affects of both types with suitable examples. [5]

19. Mention the modern methods undertaken in India to supply water to the field. [5]

20. Differentiate between bone and cartilage with respect to structure, function and location. [5]

21. State all the factors that affect the rate of evaporation of water. Discuss one by one how these factors affect the rate of evaporation. [5]

Section –B

22. What would happen if a plant cell is kept in a hypotonic and hypertonic solution? [2]

23. On observing a permanent slide under a microscope, a student found a structure without cell wall that had light and dark bands. What would be the slide of? [2]

24. To study the third law of motion, write appropriate set of apparatus that are available in a laboratory. [2]

25. (i) What happens to the temperature of water, when it boils?

(ii) At 0°C or 273K, what is the physical state of water? [2]

26. A mass of 10 gm is suspended with a spring balance. Spring balance is calibrated in newton. Find the reading of spring balance. (Take g = 9.8 m /s^2) [2]

27. Metanil yellow is widely used as an aduterant. For which food item is it used? How does it harm our body? [2]

***