

Kendriya Vidyalaya Sangathan, Mumbai Region

Summative Assessment 1 (2012-2013)

Science

Class IX

Time 3 hours

Maximum Marks 90

General Instructions:

- i) The question comprises of two sections A and B, you are to attempt both the sections.
- ii) All questions are compulsory.
- iii) There is no overall choice however internal choice has been provided in the questions of five marks category. Only one option in such questions is to be attempted.
- iv) All questions of section A and Section B to be attempted separately.
- v) Question Nos 1 to 3 of section A are 1 mark questions. They are to be answered in one word or one sentence.
- vi) Question Nos 4 to 7 are 2 mark questions, to be answered in 30 words each.
- vii) Question Nos 8 to 19 are 3 mark questions, to be answered in 50 words each.
- viii) Question No 20 to 24 are 5 mark questions, to be answered in 70 words each.
- ix) Question Nos 25 to 42 of section B are multiple choice questions based on practical skills. Each question is a 1 mark question. You are to choose the most appropriate response out of the four provided to you.

Section A

1. Melting point of three solids X, Y and Z are 298K, 314K and 398K respectively
Arrange these in decreasing order of inter particle forces of attraction.
2. A car and truck have same momentum. Whose velocity is more and why?
3. Where are protein synthesized inside the cell?
4. a) Identify the solute and solvent in tincture of iodine.
b) Why is Tyndall effect not seen in a true solution?
5. State two differences between cell wall and cell membrane.
6. Draw a labeled diagram of the neuron.
7. a) What do you mean by the term free fall?
b) During a free fall will the heavier object accelerate more than the lighter ones?

8. Answer the following questions.

What is dry ice?

Name the two gases which are supplied in compressed form in homes and hospitals.

Why is ice more effective in cooling than water at same temperature?

9. Identify the dispersed phase and dispersion medium for the following examples of the colloids.

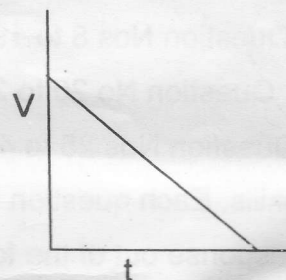
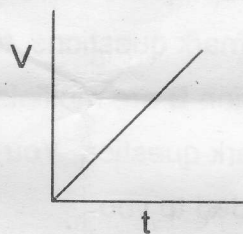
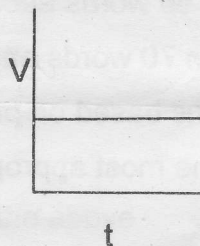
a) Shaving cream b) Cheese c) smoke

10. What are the desirable characters of bee varieties suitable for honey production?

11. State three differences between Rabi and Kharif crops.

12. Diagrammatically show the difference between the three types of muscle fibres.

13. How do you conclude about the motion of body depicted by Velocity – time graph given below



14. State Newton's first law of motion. Give two examples to illustrate Newton's first law of motion

15. A body of mass 100Kg is accelerated uniformly from velocity of 5m/s to 8m /s in 6s. Calculate the initial and final momentum of the object. Also find the magnitude of the force exerted by the object

16. Explain the terms mass and weight. Write their SI unit

17. State Newton's law of gravitation. Derive the mathematical expression of Newton's law of gravitation.

18. Classify the following as chemical or physical changes:

a) cutting of trees b) melting of ghee in a pan c) rusting of iron nails

d) boiling of water to form steam e) dissolving common salt in water f) burning of paper and wood.

19. Distinguish between solids, liquids and gases on the basis of i) compressibility
ii) rigidity iii) inter-particle spaces iv) kinetic energy v) shape and volume.

20. What is chromatography? Explain with diagram how you will separate the component of black ink using chromatography?

OR

You are given mixture of alcohol and water. Explain with diagram how you will separate the components

21. a) Derive by graphical method $S=ut + \frac{1}{2}at^2$

b) A bus starts from rest and attains a velocity of 36 km/h in 10 minutes while moving with uniform acceleration. Calculate acceleration of the bus

22. Explain briefly any five factors for which variety improvement is done in crops?

OR

What are weeds? Why should they be removed? Explain briefly two methods commonly used to remove them

23. a) What do you understand by the terms "balanced forces" and "unbalanced forces"? Explain with examples

b) What type of force ---- balanced or unbalanced—acts on rubber ball when we press it between our hands? What effect is produced in the ball?

OR

State law of conservation of momentum Derive the expression for the conservation of momentum

Section B

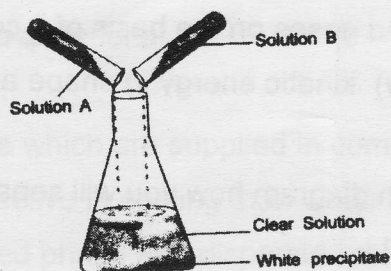
24. Name the adulterant used to give colour to Dal

- a) Turmeric powder b) Metanil yellow
c) lead salt d) chalk powder

25. A food adulterant is:

- a) Non adulterant and toxic b) deliberately mixed in the food
c) Of low quality and cheap d) all the above

26. White precipitate is formed when two solutions A & B are mixed. What are these two solutions.



- a) A – Copper sulphate, B – Sodium nitrate
b) A – lead nitrate, B – sodium nitrate
c) A – barium chloride, B – Sodium chloride
d) A - barium chloride, B – Sodium sulphate
27. Conversion of solid directly into vapor is called.
a) Vapourisation b) Fusion
c) Sublimation d) Evaporation
28. When ice melts cooling is observed because
a) As ice melts it floats on water
b) Melting of ice is an endothermic change
c) Melting of ice is an exothermic change
d) Melting point of ice is 273 at 1 atmospheric Pressure
29. What is observed when a student starts heating a mixture of iron filings and sulphur powder in a china dish
a) Mixture evaporates
b) Mixture becomes red hot
c) Sulphur starts melting
d) Iron starts melting
30. When a mixture of sodium chloride, ammonium chloride and iron filings are heated in a china dish which will be separated as sublimate
a) Sodium chloride
b) Ammonium chloride
c) Sand
d) Iron filings

31. What is the name and formula of the compound of white ash formed when magnesium ribbon is burnt on a flame of burner and a dazzling light is produced
- a) Magnesium chloride $MgCl_2$
 - b) Magnesium oxide MgO_2
 - c) Magnesium oxide MgO
 - d) Magnesium
32. When dilute sulphuric acid was added to a mixture of iron filings and sulphur powder, a colourless gas was liberated which burns with a bang. What is the name of the gas
- (a) SO_2 (b) H_2S (c) H_2 (d) FeS .
33. Milk is an example of:
- a) Suspension
 - b) True solution
 - c) colloid
 - d) white mixture
34. The reaction in which copper gets deposited on iron nails when placed in copper sulphate solution is
- a) Combination reaction
 - b) Decomposition reaction
 - c) Displacement reaction
 - d) Double Decomposition reaction
35. Rohan wants to find out accurate boiling point, he should use
- a) Sugar solution
 - b) Distilled water
 - c) Tap water
 - d) Salt water
36. The cellular components which are generally NOT seen while observing the slide of an onion peel.
- a) Cell wall
 - b) Nucleus
 - c) Cytoplasm
 - d) mitochondria

