

SUMMATIVE ASSESSMENT – I, 2016-17 SCIENCE Class – IX

NYYJNT5

Time Allowed : 3 hours

Maximum Marks : 90

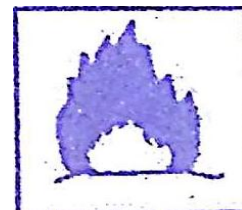
SECTION - A

1. Name two unicellular organisms.
2. Name the physical quantity that varies continuously in a uniform circular motion.
3. What is the total momentum of the bullet and the gun before the gun is fired ?
4. What do the following observations about matter demonstrate about
 - (i) When we dissolve sugar in water the water level does not rise.
 - (ii) The smell of dettole can be detected even on repeated dilution.
5. Mention the functions of the various elements of xylem.
6. (a) Name the balances used to measure mass and weight. (b) Weight of an object will be lesser or more at Antarctica as compared to the weight of object at Delhi. Give reason for your answer.
7. Name the separation technique by which we can obtain coloured components from ink? Give two more applications of the technique used.
8. Why water as steam may cause severe burns but water as ice has cooling effect? Explain.
9. (a) Name the compound formed on heating a mixture of Iron filings and sulphur. If dilute HCl is added to above compound then name the gas evolved and write its two properties.
10. What is the energy currency of the cell? Write it in expanded form. Which cell organelle is related to the energy currency?
11. (a) Name the tissue which joins : (i) muscles to bones. (ii) bones to bones. (b) Which of the two is : (i) More elastic? (ii) Stronger
12. State reasons for the following:
 - (a) When a hanging carpet is beaten with a stick, the dust particles start coming out of it.
 - (b) It is dangerous to jump out of a moving bus.
 - (c) The passengers in a bus tend to fall backward when it starts suddenly.
13. Give reasons :
 - (i) A piece of paper takes much longer to fall than a stone through the same distance, when both are dropped simultaneously from roof.
 - (ii) The mass is constant everywhere whereas the weight keeps changing.
 - (iii) The value of 'g' keeps changing as we move away from the earth whereas value of 'G' remains constant all over the universe.
14. Starting from rest a scooter acquires a velocity of 36 km/h in 10s and then brakes are applied it takes 20s to stop. Calculate acceleration and distance travelled.
15. Three balls A, B and C are kept in a straight line. The distance between A and C is 2 m, and B is placed at the midpoint between them. The masses of A, B and C are 100 gms, 200gms and 300 gms respectively. Find the net gravitational force on (a) A (b) B and (c) C due to each other. ($G = 6.7 \times 10^{-11} \text{ Nm}^2\text{kg}^{-2}$)

16. A heavy leather ball and a 'light tennis ball of equal size are kept on the floor of a moving train when train is suddenly stopped, they are set in motion. In which direction will they move? Which one of them will attain higher velocity? (Assume that friction is same for both)
17. To get a better yield, Jaikishan increased the use of pesticides and fertilizers. Though in the initial years he got higher yield and profits but the production decreased after that. He was much worried. His friend Mahesh persuaded him to abandon this practice and start using organic manure. (i) Why are fertilizers used in a field? (ii) State the possible reason for the decline in yield? (iii) List two values shown by Mahesh.
18. Name the common diseases of cattle. How can these diseases be cured
19. You are given iron filings and sulphur powder. Using these substances differentiate between physical and chemical changes (b) Differentiate between elements and compounds.
20. Compare in a tabular form, the Smell of perfume and petrol on the basis of the following properties:
(a) Shape (b) Fluidity (c) Volume (d) Compressibility (e) Force of attraction
21. Draw the labelled diagrams of longitudinal section of collenchyma and sclerenchyma tissues. Write one function of each
22. Annu has to walk to a medical shop 400 m away from her house to buy some medicine. After walking 100 m, she realizes that she does not have enough money, and goes back home. If it took her two minutes to leave and come back, calculate the following: (a) How long was she out of the house? (b) How far did she walk? (c) What was her displacement? (d) What was her average velocity in m/s? (e) What was her average speed in m/s ?
23. (a) Prove that if the earth attracts two bodies placed at the same distance from the centre of earth. With equal force; then their masses will be the same. (b) Mathematically express the acceleration due to gravity in terms of mass of the earth and radius of earth. (c) Why is 'G' called a universal constant?
24. Explain how biotic and abiotic factors influence storage of agricultural produce ? Mention the preventive and control measures used before storing food grains for future use.

SECTION - B

25. Heena took a sample of arhar dal dissolved in water to test the presence of metanil yellow and added a few drops of conc. hydrochloric acid. She observed that there is no change in the colour of the solution. This shows that.:
- (a) the dal is free from adulterant. (b) the dal didn't mix with water.
(c) the dal has adulterant in small quantity. (d) more conc. HCl should be used to get accurate result
26. Metanil yellow is a substance which is added to food stuff as :
- (a) a preservative (b) a flavouring agent (c) an adulterant (d) a vitamin
27. Following safety symbol appears on the bottle of Carbon disulphide :
- This means that carbon disulphide is :
- (a) explosive (b) oxidising (c) flammable (d) corrosive
28. Individual components of a mixture may be separated by physical methods. To separate iron filings from a mixture of iron filings and sulphur powder:
- (a) a bar magnet is used (b) carbon disulphide a solvent is used
(c) none of the above (d) both (a) and (b)



29. On heating crystal of copper sulphate in a test tube it is observed that:

- (a) the substance sublimes. (b) brown fumes are evolved.
(c) a grey mass is formed. (d) white residue is left behind.

30. When a temporary mount of a thin onion peel is observed under a compound microscope, you see:

- (a) continuous layer of flat cells without intercellular spaces (b) rectangular cells with intercellular spaces
(c) rectangular hollow cells with intercellular spaces (d) flat, hollow cells with intercellular spaces

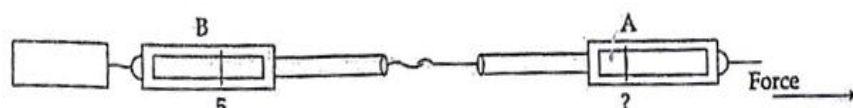
31. Cell wall of a certain type of plant tissue have thickening of lignin. They are :

- (a) parenchyma (b) collenchyma (c) sclerenchyma (d) both (b) and (c)

32. From a mixture of ammonium chloride, sand and common salt. Ammonium chloride is separated by sublimation. The remaining mixture of sand and common salt can be separated by adding water to the mixture and using the methods.

- (a) filtration and evaporation (b) sublimation and condensation
(c) separating funnel and evaporation (d) distillation and condensation

33. Consider two spring balances connected together spring balance B is attached to a rigid surface. When a force is applied through the free end of the spring balance A, The spring balance B shows 5N. What will be the reading in the spring balance A?



- (a) 15 N (b) 2.5 N
(c) 5 N (d) 10 N

34. While making a colloidal solution of starch in water why is constant stirring required? Should we add dry corn starch to boiling water or boiling water to corn starch? Why?

35. In an experiment to determine the melting point of ice in laboratory, what form of ice should be preferably used? When should the reading of thermometer be noted?

36. A student recorded the mass of dry raisins as 2.0 g and the mass of raisins after soaking as 3.5 g. calculate the percentage of water absorbed by raisins. Write one precaution for this experiment.