

## SAMPLE QUESTION PAPER 2015

### SUMMATIVE ASSESSMENT – I, 2015 SCIENCE Class – IX

TIME : 3 HRS.

M.M.90

#### General Instructions :

1. The question paper comprises of two Sections, A and B. You are to attempt both the sections.
2. All questions are compulsory.
3. All questions of Section-A and all questions of Section-B are to be attempted separately.
4. Question numbers 1 to 3 in Section-A are one mark questions. These are to be answered in one word or in one sentence.
5. Question numbers 4 to 6 in Sections-A are two marks questions. These are to be answered in about 30 words each.
6. Question numbers 7 to 18 in Section-A are three marks questions. These are to be answered in about 50 words each.
7. Question numbers 19 to 24 in Section-A are five marks questions. These are to be answered in about 70 words each.
8. Question number 25 to 33 in Section – B are Multiple Choice questions on practical skills. Each question is a one mark question. You are to select one most appropriate response out of four provided to you.
9. Question numbers 34 to 36 are questions based practical skills are two marks questions.

#### SECTION – A

1. Name a connective tissue which has a hard matrix. 1
2. If the distance between two point masses is doubled what will happen to the gravitational force of attraction between them? 1
3. Define sustainable practices in agriculture. 1
4. Among solids , liquids and gases , which one has : 2
  - (a) maximum force of attraction between the particles
  - (b) minimum spaces in between constituent particles. Give reason in support of your answer.
5. Mention the function of the various elements of Xylem. 2
6. (a) Mention two factors on which force of a body depends. 2
  - (b) The force applied by a moving toy aeroplane on the wall is 20N when it moves at the rate of  $4\text{m/s}^2$ . Find the mass of the toy.
7. (a) State the difference between a pure substance and a mixture. Give one example of each. 3
  - (b) Identify homogenous mixture from the following :  
(a) smoke (b) Brass (c) Tincture of Iodine (d) Milk
8. Give any three differences between a mixture and compound. 3

9. Aarushi's mother always squeezes water from wet clothes in the spinner of washing machine and then uses it to clean the floor. 3
- (a) Write the principle of the technique used in the above mentioned process.
- (b) Write one more application of this technique.
- (c) What do you learn from Aarushi's mother?
10. Define Osmosis. In what two ways it is different from diffusion. 3
11. Identify the type of tissues in the following : 3
- (a) Vascular bundle    (b) Inner lining of the Intestine    (c) Lining of Kidney tubule
- (d) Iris of the eye    (e) Muscle of the heart    (e) Bronchi of lungs
12. A motor car is moving with a velocity of 108 km/h and it takes 4 s to stop after the brakes are applied. Find the force exerted by the brakes on the motor car if its mass along with the passengers is 1000 kg. 3
13. Use velocity time graph to derive graphically the equation for position time relation for travelling a distance's under uniform acceleration (a). 3
14. A ball is thrown upwards from the surface of the moon with a velocity of 19.6m/s
- (a) How much time will it take to attain the maximum height 3
- (b) How high will it go ?
15. (a) State the law of conservation of momentum.
- (b) A mass of 200 kg is accelerated uniformly from a velocity of  $10 \text{ ms}^{-1}$  to  $16 \text{ ms}^{-1}$  in 12s. Calculate the initial and final momentum of the object and the force that brings about this change. 3
16. Write two macro and micro nutrients needed for the growth of plants. How would the plants be affected, if they are deficient in the soil? 3
17. (a) List three factors on which cultivation practices and crop yield depends.
- (b) Name three stages involved in farming practices. 3
18. Write the two purposes of poultry farming. Name one indigenous and one exotic breeds of hen. 3
19. (a) Mention any two differences between physical and chemical changes. Give one example of each.
- (b) List any two properties for each of the following case of metals which makes them suitable to be used as :
- (i) utensils for cooking food    (ii) wires for electrical connections 5
20. (a) List the three characteristics of particles of matter.
- (b) Arrange the following substances in increasing order of forces of attraction between the particles – milk, sugar, carbon dioxide.
- (c) On a hot sunny day, people sprinkle water on the roof or open ground. Explain with reason.
- (d) Write the factors which determine the state of a substance? 5
21. (i) Define tissue. What is the utility of tissues in multi cellular organisms?

- (ii) Are plant and animals made of same types of tissues ? If no, then. Write three points of difference. 5
22. (a) Write the formula to find the magnitude of gravitational force between earth and an object on earths' surface.
- (b) What is direction of an object moving with acceleration due to gravity?
- (c) How does the value of gravitational force 'F' change between two objects when the :
- (i) distance between them is reduced to half, and
- (ii) mass of one object is increased four times
- (iii) distance is reduced to one fourth. 5
23. State Newton's first law of motion. Show that Newton's first law of motion is a special case of Newton's second law. Determine the acceleration of a car of mass 800 kg, on application of a force of 200 N on it. 5
24. Define animal husbandry ? Discuss the feeding, breeding and controlling the diseases of cattle population in dairy farming. 5

### SECTION – B

25. Which one of the following chemical gives a blue black colour with starch? 1
- (a) fluorine (b) chlorine (c) iodine (d) bromine
26. To observe starch granules in potato under a microscope, freshly cut surface of potato was pressed on a slide. The stain that will show starch granules clearly is: 1
- (a) Acetocarmine (b) Iodine (c) Safranin (d) Eosin
27. When a mixture of iron filings and sulphur powder was prepared, it was observed that the colour of iron filings is : 1
- (a) greyish (b) reddish (c) yellow (d) green
28. A student by mistake mixed iron filing and sulphur powder. He wanted to separate them from each other. The method you would advise him to use is to dissolve the mixture in : 1
- (a) boiling water (b) cold water (c) carbon disulphide (d) kerosene
29. Rahul placed an iron strip in copper sulphate solution and after about four hours he observed that the coating deposited on the iron strip is : 1
- (a) grey and hard (b) soft and black (c) reddish brown (d) smooth and shiny
30. To observe cells in an onion peel, we must prepare the slide by using : 1
- (a) crushed pulp of onion (b) dry scale leaf
- (c) green leaf of onion (d) thin layer of fleshy leaf of onion
31. The slide under microscope shows alternate light and dark bands and many nuclei in the cells. It may most probably be of : 1
- (a) nerve cell (b) phloem fibres (c) striated muscle (d) sclerenchyma
32. During the process of Sublimation the pure substance which collects on the inner side of

- funnel is called : 1
- (a) Mixture (b) Sodium (c) Sublimate (d) Colloid
33. The direction of force of friction is : 1
- (a) opposite to the direction of force applied on body  
(b) same as the direction of force applied on body.  
(c) direction not fixed.  
(d) independent of force applied
34. Identify two clear and transparent solutions from the following mixtures:- 2
- (a) milk and water (b) sugar and water (c) chalk powder and water  
(d) starch powder and water (e) glucose and water
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? 2
36. If 'x' is the initial mass of the raisins and 'y' is the final mass of raisins after soaking in water. Calculate the percentage of water absorbed by raisins. 2