
Indraprastha International School
SUMMATIVE ASSESSMENT-I, 2015-16
CLASS: IX, SCIENCE SET-A

910A

Time allowed: 3 hours

Maximum Marks: 90

General Instructions:

1. This question paper consists of 36 questions and 4 printed pages.
2. All the questions are compulsory.

Section A

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| Q. 1 | State the significance of membrane biogenesis. | 1 |
| Q. 2 | State the condition under which a body travels a certain distance and yet its resultant displacement be zero. | 1 |
| Q. 3 | Mention two activities undertaken for improvement of crop yield. | 1 |
| Q. 4 | What is endocytosis ? Name an organism that feeds by this method. | 2 |
| Q. 5 | Chloroplast and mitochondria are referred to as semi-autonomous organelles. Justify. | 2 |
| Q. 6 | State two differences between leucoplast and chromo last. | 2 |
| Q. 7 | A moving train is brought to rest in 20 seconds by applying brakes. Find the velocity with which the train was initially moving, if the retardation due to brakes is 2 m/s^2 . | 3 |
| Q. 8 | (a) Why is milk considered to be a heterogeneous mixture?

(b) A solution is made by dissolving 25 grams of sugar in 175 grams of water. Calculate the concentration of the sugar solution. | 3 |
| Q. 9 | Suggest a suitable method to separate the components of these mixtures. Also write the basic principle of each method.

(a) Butter from cud;
(b) Oil from water;
(c) Camphor from common salt. | 3 |
| Q.10 | (a) Write the difference between uniform motion and non-uniform motion.

(b) Mention the nature of the motion of a body whose distance-time graph is a straight line parallel to the time axis. | 3 |
| Q.11 | (a) State Newton's third law of motion.

(b) When a bullet is shot from a rifle, the rifle recoils back. Why? | 3 |
| Q.12 | (a) What do you mean by inertia of a moving body?

(b) Calculate the force required by a car to change its velocity from 30 m/s to zero in | 3 |
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10 seconds. The mass of the car is 1500 kg.

- Q.13 (a) What is the effect on the gravitational force between two objects, if 3
- (i) the mass of one object is doubled?
- (ii) the distance between the 3 objects is doubled?
- Q.14 (a) Differentiate between mass and weight. 3
- (b) A man buys 2Kg of gold at the poles. Will its weight increase or decrease at the equator?
- Q.15 Give reason for each of the following:- 3
- (a) We get a crunchy and granular feeling when we chew pear fruit
- (b) Cells of sclerenchyma tissue have a narrow lumen.
- Q.16 (a) Explain composite fish culture. 3
- (b) State one merit and one demerit of this system.
- Q.17 (a) What is green maturing? 3
- (b) Why should preventive measures and biological control methods be preferred for crop protection?
- Q.18 (a) Name the connective tissues which help in repair of tissues. 5
- (b) State the location of the tissue named above and also mention one of its functions.
- Q.19 How will you separate a mixture containing petrol (boiling point 95°C) and acetone (boiling point 56°C) which are miscible with each other? Describe with the help of a well-labelled diagram. 5
- Q.20 (a) Convert -23°C into Kelvin. 5
- (b) Name the technique which is followed in separation of iron pieces from metal scrap.
- (c) Name the types of colloids in which the dispersed phase and dispersing medium are respectively:
- (i) Solid and gas
- (ii) Solid and Solid
- (iii) Solid and liquid
- Also give one example of each.
- Q.21 (a) Draw a well-labelled diagram of chloroplast. 5
- (b) What happens when
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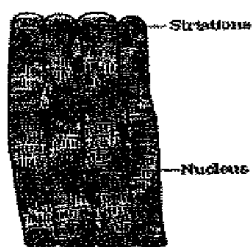
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- (i) almonds are soaked in water?
 - (ii) concentrated solution of fertilizer is applied to green grass lawn?

Give a reason in support of your answer.

- Q.22 (a) Give a reason for each of the following statement:- 5
- (i) Evaporation causes cooling.
 - (ii) Heat is unbearable after rain in hot season.
- (b) Compare the properties of colloid, suspension and true solution in a tabular form.
- Q.23 (a) Draw the velocity-time for an object which is undergoing uniform retardation. 5
- (b) Derive the second equation of motion, graphically.
 - (c) A stone is dropped from a height of 50m. Calculate its velocity just before it touches the ground. (take $g=10\text{m/s}^2$)
- Q.24 (a) While playing cricket, Karan advised his friend Rohan not to catch the ball when it is high in the air. 5
- (i) Why did Karan advise him so?
 - (ii) What values would you appreciate in Karan's behavior? (any two)
- (b) A bullet of 30g moving at 150m/s hits and sticks to a wooden block of 40kg. What is their combined velocity?

Section B

- Q.25 The cellular component not seen while observing a slide of onion peel under lower Magnification of microscope is _____. 1
- (a) Cell wall
 - (b) Chromosome
 - (c) nucleus
 - (d) cytoplasm
- Q.26 Shivi, a student of class IX, observed the following structure in the slide under the microscope. The given diagram is _____. 1
- (a) Cardiac Muscle
 - (b) Striated muscle
 - (c) Collenchymas
 - (d) Nerve cell
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- Q.27 Which one of the following is a suspension? **1**
- (a) Face cream
 - (b) Jelly
 - (c) Paints
 - (d) Milk of Magnesia
- Q.28 Define water of crystallization. **1**
- Q.29 When magnesium ribbon burnt in the air, the product formed is _____ in colour. **1**
- (a) Silver
 - (b) Brown
 - (c) Yellow
 - (d) Blue
- Q.30 Which stain is used for preparing temporary mount of animal cell? **1**
- Q.31 A permanent slide is observed by Ryan. He noticed this walled isodiametric cells with a large vacuole. The slide contains _____. **1**
- (a) Parenchyma cells
 - (b) nerve cells
 - (c) sclerenchyma cells
 - (d) collenchymas cells
- Q.32 The boiling point of a liquid is very high, what does it indicate? **1**
- Q.33 Define the term 'balanced force'. **1**
- Q.34 Under which category of mixture will you classify alloys and why? **2**
- Q.35 Why is ice at 273 K more effective in cooling than water at the same temperature? **2**
- Q.36 (a) Name the protein present in muscles which is responsible for movement. **2**
- (b) Name the tissues that increase the girth of stem of a plant.