

SUMMATIVE ASSESSMENT - I, 2014**SCIENCE****Class - IX****Time Allowed : 3 hours****Maximum Marks : 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 numbers 25 to 33 in Section-B are multiple choice questions based on practical skills. Each question is a one mark question. You are to select one most appropriate response out of the four provided to you.
9. Question numbers 34 to 36 in Section-B are questions based on practical skills are two marks questions.

SECTION-A

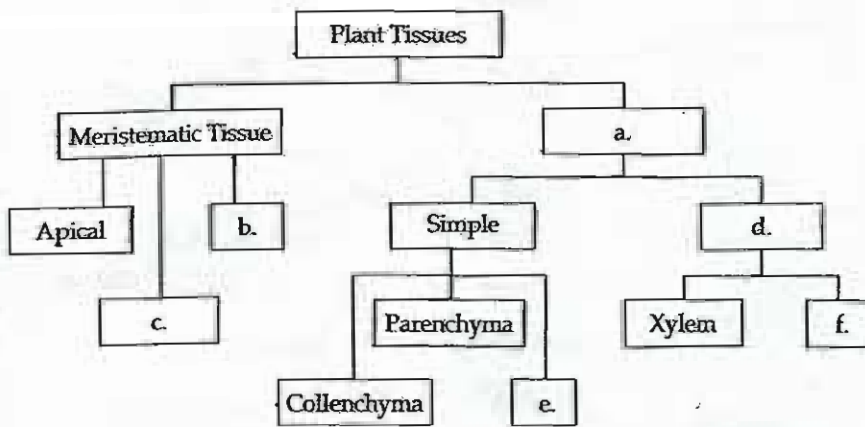
- | | | |
|---|---|---|
| 1 | How is a cartilage different from a bone ? | 1 |
| 2 | If a balloon filled with air and its mouth untied, the air is released from its | 1 |

	mouth in the downward direction, and balloon moves upwards. Identify action and reaction in this case.	
3	Give an example of a motion in which acceleration is non – uniform.	1
4	State the separation technique used for the separation of the following : (a) Ammonium chloride from a mixture containing sodium chloride and ammonium chloride <i>subl</i> (b) Copper sulphate from its solution in water. <i>lyphi</i>	2
5	What do you understand by the term 'membrane biogenesis' ?	2
6	Define gravitational constant. State its SI unit. State the value of gravitational constant (G) on the earth.	2
7	(a) The room temperature is 25°C. What is the corresponding temperature on the Kelvin scale ? (b) Give the reason for the existence of the three states of matter.	3
8	(a) On which factor does a solution said to be diluted or concentrated ? (b) What would be observed when a saturated solution of potassium chloride at 60°C is allowed to cool at room temperature ? (c) Name the process involved in squeezing out water from wet clothes in washing machine	3
9	Describe an activity to show that particles of matter have spaces between them.	3

JK

10 Complete the following flow diagram :

3



11 Correlate the first pair of words given below and accordingly insert a suitable word in the second pair. 3

(a) Heart : Cardiac muscles :: stomach : Smooth muscles

(b) Tissue repair : Areolar :: Insulation : _____

(c) Squamous epithelium : Protection :: Cuboidal : Absorption and secretion.
collenchyma

12 Define the term uniform acceleration. Give one example of uniformly accelerated motion. 3

A bus decreases its speed from 72 km/h to 54 km/h in 5 s. Find the acceleration of the bus.

13 Which law of motion can best describe the following : 3

- Force applied while pulling a lawn mower.
- Shoulder bone fracture from recoil of a gun.
- Coin remains on the table, when table cloth is suddenly removed.

14	<p>What are the effects of the following on inertia of a body?</p> <p>a) If force is doubled b) If density is halved c) If weight is reduced by three times.</p>	3
15	<p>A body of mass 10 kg is moving with a velocity of 1 ms^{-1}. Find (i) The magnitude of the force required to stop the body in 10 s. (ii) the distance the body will move through before coming to rest.</p>	3
16	<p>Rahul while doing skating moves along a number line in the alphabetical order (A, B, C, D, ..., G) and finally stops at 'G'.</p> <p>(a) Calculate the distance travelled by him. (b) Find his average velocity if he covers each metre in 1 s.</p>	3
17	<p>India is a country with three fourth of the population engaged in agriculture. Even though financial conditions of some farmers do allow them to take higher level farming practices and improved agriculture technology, yet they are hesitant to use of HYV seeds with traits such as resistance to disease and pests, high quality that would results finally in higher yield.</p> <p>(i) What is meant by genetically modified crops ? (ii) What are the desired agronomic characters for fodder and cereal crops ? (iii) In your opinion what should be done so that the modern agriculture technology is adopted by most of the farmers ?</p>	3
18	<p>Differentiate between capture fishery and culture fishery. How fish production can be increased in marine capture fisheries ?</p>	3

19	<p>(i) Convert the following temperature into Kelvin scale :</p> <p>(a) 100°C (b) 25°C (c) 20°C</p> <p>(ii) Write physical state of water at :</p> <p>(a) 25°C (b) 0°C</p>	5
20	<p>(a) Compare metals and nonmetals based on their physical properties (any four points).</p> <p>(b) What are metalloids. Give two examples.</p> <p>(c) Identify metals from the following – boron, sodium, mercury, carbon.</p>	5
21	<p>Answer the followings :</p> <p>(a) Name the constituents of phloem tissues.</p> <p>(b) Write the specific function of cardiac muscle.</p> <p>(c) State two differences between tendon and ligament.</p> <p>(d) Name the tissue that :</p> <p>(i) forms of inner lining of our mouth. <i>SE</i></p> <p>(ii) forms the soft parts of leaf, stem, roots and fruit.</p> <p>(e) Write one function of adipose tissues.</p>	5
22	<p>(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.</p> <p>(b) <i>Experimented</i> Mathematically express the acceleration due to gravity that is expressed by a free falling object.</p> <p>(c) Why is 'G' called a universal constant ?</p>	5

$$\frac{GM}{R^2} = \frac{6.67 \times 10^{-11} \times 6 \times 10^{24}}{6.6 \times 10^{28}} = 9.8$$

- 23 Give reason : 5
- (a) Value of 'g' is not constant on earth.
 - (b) Objects with different masses take same time to fall from a fixed height.
 - (c) 'G' is known as gravitational constant.

- 24 Describe the type of loss caused by inappropriate conditions of moisture and temperature prevailing during storage of grains. 5

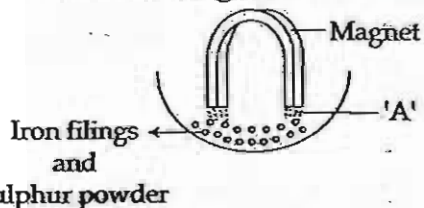
SECTION - B

- 25 A student added two drops of conc hydrochloric acid to adulterated dal in test tube A. Another student added a little sample to conc. hydrochloric acid in test tube B. They would observe. 1
- (a) appearance of pink colour in any test A
 - (b) no change of colour in any test tube
 - (c) appearance of pink colour in test tube B
 - (d) appearance of pink colour in test tubes A and B
- 26 Before testing starch in different food materials like Rice, potatoes etc. they should be crushed so that : 1
- (a) enough sample is there
 - (b) homogeneity is there
 - (c) heterogeneity is there
 - (d) test is positive
- 27 For the formation of iron sulphide from iron filings, the component taken 1

in excess is

- (a) iron (b) sulphur
(c) carbon disulphide (d) sulphur dioxide

- 28 A small amount of mixture of iron filings and sulphur is taken in a watch glass and a bar magnet is rolled over it. 1



The substance 'A' sticking to the magnet in the above figure is :

- (a) sulphur (b) iron filings
(c) iron sulphide (d) complete mixture

- 29 Crystals of copper sulphate are heated, they turn white. This colour change is due to : 1

- (a) loss of copper ions
(b) loss of sulphate ions
(c) decomposition of copper sulphate
(d) loss of water of crystallisation

color →

- 30 A student used a red stain for mounting a peel of onion. This corresponds to the stain 1

- (a) Acetocarmine (b) Methylene blue
(c) Safranin (d) Iodine

- 31 Select the incorrect statement for striated muscles : 1

- (a) show alternate light and dark bands
(b) undergo rapid contractions
(c) get tired and need rest

	(d) Are involuntary	
32	A mixture contains only <u>Iodine</u> , <u>Ammonium chloride</u> and <u>Sand</u> . Only <u>Iodine</u> and <u>Ammonium chloride</u> <u>sublime</u> . Only Iodine dissolves in carbon tetra chloride. How will you separate the three components ? Sequence of steps will be	1
	(a) By <u>sublimation</u> addition of <u>CCl₄</u> (b) Addition of <u>CCl₄</u> , filtration, sublimation (c) <u>Sublimation</u> , addition of <u>H₂O</u> , filtration. (d) evaporation, distillation, crystallization	
33	Property of a body by virtue of which it opposes any change in state is called : (a) Momentum (b) Energy (c) Inertia (d) Acceleration	1
34	State the method by which we can prepare colloid of starch.	2
35	In an experiment to determine the ^{melting} boiling point of ^{ice} water. State reason for the following:- <i>why should we take distilled</i> (a) Pumice stone pieces are added to water in the beaker. (b) A glass stirrer is used.	2
36	A teacher soaked 10g raisins in 35ml of distilled water in a beaker A and similar amount in beaker B. She maintained the temperature of beaker A at 20°C and beaker B at 40°C. After an hour compare the percentage of water absorbed by the raisins in beakers A and B.	2