ZIET CHANDIGARH

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SCIENCE (THEORY)

Summative Assessment – I (SA 1 - Term I)

CLASS : IX

MAX. Marks: 90 **TIMES: 3 Hrs.**

General Instructions:

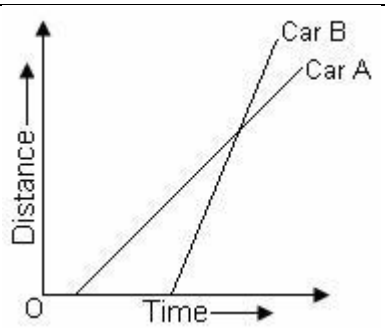
a. *The question paper comprises of two sections A and B, you are to attempt both the sections.*
b. *All questions are compulsory.*
c. *There is no overall choice. However internal choice has been provided in all the three questions of five marks category. Only one option in each question is to be attempted.*
d. *Questions from **1 to 3** in section A are one mark questions these are to be answered in one word or a sentence.*
e. *Questions from **4 to 7** in section A are Two marks questions. These are to be answered in about 30 word each.*
f. *Questions from **8 to 19** in section A are Three marks questions These are to be answered in about 50 word each.*
g. *Questions from **20 to 24** in section A carry five marks questions. These are to be answered in 70 words each.*
h. *Questions from **25 to 42** in section B are multiple choice questions based on practical skills. Each question is one mark question. You are to select one most appropriate response out of the four provided to you.*

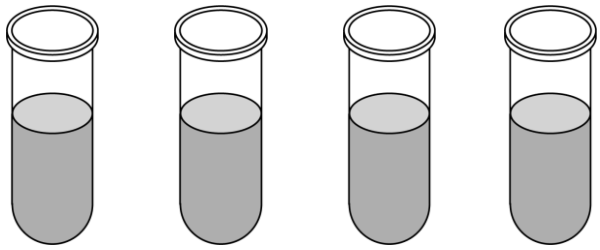
SECTION – A

1.	A substance has a definite volume but no definite shape. State whether this substance is a solid, liquid or a gas.	1

<table>
<tr><td>2.</td><td>What is the resultant force of a number of balanced forces acting on body?</td><td>1</td></tr>
<tr><td>3.</td><td>Name the plastids which have chlorophyll .</td><td>1</td></tr>
<tr><td>4.</td><td>State the difference between homogeneous & heterogeneous mixture . Give one example of each.</td><td>2</td></tr>
<tr><td>5.</td><td>What is the relation between the mass and the weight of the body ? What are the differences between the two ?</td><td>2</td></tr>
<tr><td>6.</td><td>State two differences between a mitochondria and plastid.</td><td>2</td></tr>
<tr><td>7.</td><td>Mention the significance of meristems in plants.</td><td>2</td></tr>
<tr><td>8.</td><td>Give reasons :
a) A sponge can be pressed easily; still it is called a solid.
b) Water vapours have more energy than water at same temperature.
c) Naphthalene balls disappear with time without leaving any solid.</td><td>3</td></tr>
<tr><td>9.</td><td>What is meant by concentration of a solution. Calculate the concentration of a solution which contains 12 g of urea in 160 g of solution.</td><td>3</td></tr>
<tr><td>10.</td><td>Consider the following details. Can you interpret the type of motion shown by car A and car B? Show calculations.
Car-A
<table><tr><td>Time in Seconds</td><td>0</td><td>5</td><td>10</td><td>15</td><td>20</td><td>25</td><td>30</td><td>35</td></tr><tr><td>Distance covered in metres</td><td>0</td><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td><td>60</td><td>70</td></tr></table>Car-B
<table><tr><td>Time in Seconds</td><td>0</td><td>5</td><td>10</td><td>15</td><td>20</td><td>25</td><td>30</td><td>35</td></tr><tr><td>Distance covered in metres</td><td>0</td><td>5</td><td>15</td><td>20</td><td>30</td><td>60</td><td>65</td><td>75</td></tr></table></td><td>3</td></tr>
<tr><td>11.</td><td>Which of the following has more inertia & Why ?
a) A rubber ball and a stone of the same size .
b) A bicycle and a train.</td><td>3</td></tr>
<tr><td>12.</td><td>Two similar trucks are moving with a same velocity on a road. One of them is loaded while the other is empty. Which of the two will require a larger force to stop it?</td><td>3</td></tr>
<tr><td>13.</td><td>Consider two bodies A and B. The body B is heavier than A. Which of the bodies is attracted with a greater force by earth? Which of the two will fall with greater acceleration? Explain.</td><td>3</td></tr>
<tr><td>14.</td><td>Show that if a body is taken to a height H above the earth’s surface acceleration due</td><td>3</td></tr>
</table>

	to gravity is decreased by the factor $R^2/(R+H)^2$,Where R is the radius of the earth.	
15.	State the ways in which phloem is functionally different from Xylem.	3
16.	Draw a neat diagram of a section of Phloem and label four parts.	3
17.	Give one important functional difference amongst the muscle tissues and draw a labeled diagram of the muscle tissue which never shows fatigue.	3
18.	Which cell organelle would you associate with elimination of old and worn out cells & Why?	3
19.	Which two factors bring about loss of food grains during storage? Give one example each. State any two control measures to be taken before grains are stored.	3
20.	a) Account for the following: i) Hydrogen is considered an element. ii) Water is regarded as compound. b) What is the physical state of water at i) 250°C ii) 100°C ? **OR** a) What is meant by evaporation? What are the factors on which the rate of evaporation depend upon? b) How does evaporation cause cooling?	5
21.	a) Name the process you would use to : i) recover sugar from an aqueous sugar solution. ii) separate mixture of salt solution and sand. b) Which of the following will show "Tyndal Effect" & why ? i) Salt Solution ii) Milk iii) Copper Sulphate Solution iv) Starch Solution **OR** a) How are sol, solution and suspension different from each other? b) Which of the following is chemical change? Justify. i) Rusting of iron ii) Mixing of iron fillings and sand iii) Cooking of food iv) Freezing of water	5
22.	The graph below represents the distance-time graph of two cars A and B. Which car is moving with a greater speed when both are moving and why?	5

	 OR Define uniform acceleration . Derive the following equations considering uniform acceleration: a) $s = ut + ½ at^2$ b) $v^2 = u^2 + 2as$	
23.	Identify whether it is balanced or unbalanced force that causes the following different types of movement. (i) A person resting in an armchair. (ii) A cyclist braking. (iii) A lorry travelling at a constant speed on a straight road. (iv) A car that has a deceleration of 10 m/s^2. OR Explain hoe Newton's second law can be used to define the unit of force. Define the SI unit of force.	5
24.	How crop variety improvement methods come to the rescue of farmers facing repeated crop failure? Describe three factors for which they could do crop improvement. Which is the most common method of obtaining improved variety of crops? Explain briefly. OR A poultry farmer wants to increase his broiler production. Explain three management practices followed to enhance the yield In what way is the daily food requirement of broiler different from those of egg layers.	5

SECTION- B		
25.	Pick out a colloid from the following :  (a) Sugar solution (b) Salt solution (c) Muddy solution (d) Milk	1
26.	Egg albumin in water forms : a) True solution b) Colloid c) Suspension d) None of these	1
27.	Which of the following represents a correct set of observations for a mixture of common salt and water? **Transparency** **Stability** **Filtration** a) Transparent Unstable No residue b) Transparent Stable No residue c) Translucent Stable No residue d) Opaque Unstable Residue	1
28.	When a mixture of iron fillings and sulphur is heated , the colour of the mixture changes from : a) Black to yellow b) Yellow to black c) Greyish yellow to black d) Black to brown	1
29.	The colour of hydrated copper sulphate is : a) Blue b) Colourless c) Brown d) Yellow	1

30.	What happens when Zn granules react with dilute sulphuric acid : a) Bubbles due to colourless , odourless gas are formed and colourless solution is obtained. b) No reaction takes place. c) Pungent smelling gas comes out. d) No gas evolved.	1
31.	What happens when iron nails are added to copper sulphate solution : a)The solution becomes pale green and reddish brown copper metal gets deposited. b) The solution becomes colourless. c) There is no reaction . d) Copper displaces iron.	1
32.	Which of the following substances sublimes on heating : a) Iodine b) Camphor c) Naphthalene d) All of these	1
33.	At what temperature ice and water both exist together under normal atmospheric pressure ? a) Below 273.16 K b) Above 273.16 K c) At 273.16 K d) None of these	1
34.	Recovery of salt from salt solution in water can be done by : a) Evaporation b) Distillation c) Filtration d) None of these	1
35.	If a particle moves with a constant speed , the distance time graph is a a) straight line b) circle c) straight vertical line d) polygon	1
36.	In circular motion the a) direction of motion is fixed b) direction of motion changes continuously c) acceleration is zero d) velocity is constant	1
37.	If no force acts on a body, it will a) get de-shaped b) Move with increasing speed c) Either remain at rest or move in a straight line d) Break	1

38.	The steps for conducting the starch test on the given sample of rice grains are i) Crush the rice grains ii) Add water to the test tube iii) Add few drops of iodine iv) Boil the contents and filter The most appropriate order in which the steps should be followed are a) ii, iii, I, iv b) ii, I, iii, iv c) iii, iv, I, ii d) I, ii, iv, iii	1
39.	While preparing a temporary mount of the Cheek cells, the reason behind staining the cells is a) To prevent the cells from dying quickly b) To preserve them c) To distinct them d) To make them the organelles clearly visible	1
40.	Girt is formed in some fruits due to a) Sclereids b) Parenchyma c) Fibres d) Collenchyma	1
41.	A pulse is a/an: a) An isolated wave a very short duration b) Group of 1-3 waves c) Group of large number of waves d) Electrical in nature having many waves	1
42.	Which of the following has the largest inertia? a) A pin b) An ink pot c) Your physics text book d) Your body	1

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