

SCIENCE (THEORY)

Summative Assessment – I (SA 1 - Term I)

2013

CLASS : IX

MAX. Marks: 90

TIMES: 3 Hrs.

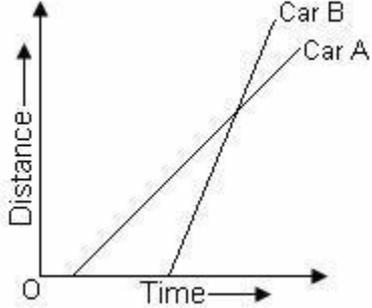
General Instructions:

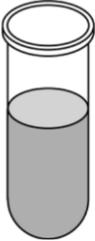
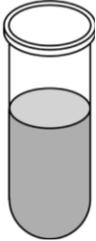
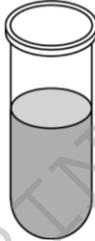
- a. *The question paper comprises of two sections A and B, you are to attempt both the sections.*
- b. *All questions are compulsory.*
- c. *There is no overall choice. However internal choice has been provided in all the three questions of five marks category. Only one option in each question is to 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																																				
2.	What is the resultant force of a number of balanced forces acting on body?	1																																				
3.	Name the plastids which have chlorophyll .	1																																				
4.	State the difference between homogeneous & heterogeneous mixture . Give one example of each.	2																																				
5.	What is the relation between the mass and the weight of the body ? What are the differences between the two ?	2																																				
6.	State two differences between a mitochondria and plastid.	2																																				
7.	Mention the significance of meristems in plants.	2																																				
8.	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.	3																																				
9.	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.	3																																				
10.	Consider the following details. Can you interpret the type of motion shown by car A and car B? Show calculations. Car-A <table border="1" data-bbox="272 1236 1337 1331"> <tbody> <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> </tbody> </table> Car-B <table border="1" data-bbox="272 1413 1337 1507"> <tbody> <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> </tbody> </table>	Time in Seconds	0	5	10	15	20	25	30	35	Distance covered in metres	0	10	20	30	40	50	60	70	Time in Seconds	0	5	10	15	20	25	30	35	Distance covered in metres	0	5	15	20	30	60	65	75	3
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11.	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.	3																																				
12.	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?	3																																				

13.	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.	3
14.	Show that if a body is taken to a height H above the earth's surface acceleration due to gravity is decreased by the factor $R^2 / (R+H)^2$, Where R is the radius of the earth.	3
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.	<p>a) Account for the following:</p> <p>i) Hydrogen is considered an element.</p> <p>ii) Water is regarded as compound.</p> <p>b) What is the physical state of water at i) 250°C ii) 100°C ?</p> <p style="text-align: center;">OR</p> <p>a) What is meant by evaporation? What are the factors on which the rate of evaporation depend upon?</p> <p>b) How does evaporation cause cooling?</p>	5

21.	<p>a) Name the process you would use to :</p> <p>i) recover sugar from an aqueous sugar solution.</p> <p>ii) separate mixture of salt solution and sand.</p> <p>b) Which of the following will show “Tyndal Effect” & why ?</p> <p>i) Salt Solution ii) Milk</p> <p>iii) Copper Sulphate Solution iv) Starch Solution</p> <p style="text-align: center;">OR</p> <p>a) How are sol, solution and suspension different from each other?</p> <p>b) Which of the following is chemical change? Justify.</p> <p>i) Rusting of iron ii) Mixing of iron fillings and sand</p> <p>iii) Cooking of food iv) Freezing of water</p>	5
22.	<p>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?</p>	5
	<p style="text-align: center;"></p> <p style="text-align: center;">OR</p> <p>Define uniform acceleration . Derive the following equations considering uniform acceleration:</p> <p>a) $s = ut + \frac{1}{2} at^2$</p> <p>b) $v^2 = u^2 + 2as$</p>	

23.	<p>Identify whether it is balanced or unbalanced force that causes the following different types of movement.</p> <p>(i) A person resting in an armchair.</p> <p>(ii) A cyclist braking.</p> <p>(iii) A lorry travelling at a constant speed on a straight road.</p> <p>(iv) A car that has a deceleration of 10 m/s^2.</p> <p style="text-align: center;">OR</p> <p>Explain how Newton's second law can be used to define the unit of force. Define the SI unit of force.</p>	5
24.	<p>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.</p> <p>Which is the most common method of obtaining improved variety of crops? Explain briefly.</p> <p style="text-align: center;">OR</p> <p>A poultry farmer wants to increase his broiler production. Explain three management practices followed to enhance the yield</p> <p>In what way is the daily food requirement of broiler different from those of egg layers.</p>	5
SECTION- B		
25.	<p><i>Pick out a colloid from the following :</i></p> <div style="display: flex; justify-content: space-around; align-items: center;"><div style="text-align: center;"><p>(a)</p><p>Sugar solution</p></div><div style="text-align: center;"><p>(b)</p><p>Salt solution</p></div><div style="text-align: center;"><p>(c)</p><p>Muddy</p></div><div style="text-align: center;"><p>(d)</p><p>Milk solution</p></div></div>	1

26.	Egg albumin in water forms : a) True solution c) Suspension	b) Colloid d) None of these	1	
27.	Which of the following represents a correct set of common salt and water? Transparency	Stability Unstable Stable Stable Unstable	Filtration No residue No residue No residue Residue	1
28.	When a mixture of iron fillings and sulphur is heated , the colour of the mixture changes from : a) Black to yellow c) Greyish yellow to black	b) Yellow to black d) Black to brown	1	
29.	The colour of hydrated copper sulphate is : a) Blue c) Brown	b) Colourless 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

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