Pallakjasya 1XF

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L9DIE95

SUMMATIVE ASSESSMENT – I, 2016-17
SCIENCE
Class – IX
SET-B

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. Each question is of **two marks.**

SECTION-A

1	State the energy currency of the cell ?	1
2	Give an example of a uniform circular motion.	1
3	What is the momentum of a toy car of mass 200 g moving with a speed of 5 m/s ?	1
4	Is milk a homogeneous or a heterogeneous mixture? Will it show Tyndall effect? Give reason.	2
5	Name the tissue which is present in the respiratory tract and what is its function ?	2
6	(a) State Universal law of Gravitation. (b) Using the formula for 'G', find its SI unit.	2
7	Write the role of the following in water purification system : (a) Sedimentation tank (b) Loading tank (c) Chlorination tank	3
8	Describe an activity to show that particles of matter have spaces among them.	3
9	With the help of labelled diagram describe an activity to show that particles of matter are very small.	3

10   What is the fundamental unit of life? Who discovered it? How can they be observed?   3
11   Differentiate between different types of simple permanent tissues.   3
12   A bullet of mass 10 g is fired with a rifle. The bullet takes 0.004 s to move through the barrel   3
     and leaves it with a velocity of 400 m/s. Calculate the force exerted on the bullet by the rifle ?
13   Give reasons :   3
     (i)   A piece of paper takes much longer to fall than a stone through the same distance, when both
     are dropped simultaneously from roof.
     (ii)   The mass is constant everywhere whereas the weight keeps changing.
     (iii)   The value of 'g' keeps changing as we move away from the earth whereas value of 'G'
     remains constant all over the universe.
14   If a bus is moving from B to A and due to application of brakes it slows down, and then   3
     comes to a stop.

     A•————————←————————•B
     (a)   What is the direction of its acceleration ? Is the acceleration positive or negative ?
     (b)   Define uniform acceleration and uniform velocity.
15   (i)   A force of 20 N acts upon a body, whose weight is 9.8 N. What is the mass of the body and   3
     how much is its acceleration. ($g = 9.8$ ms^{-2})
     (ii)   If weight of a body is 50 N. What is its mass ? ($g=9.8$ ms^{-2})
16   Answer the following questions :   3
     (i)   The distance – time graph of motion of a body is parallel to 'X' axis. Identify the nature of
     motion of the body.
     (ii)   Name the quantity measuresd by the slope of the distance – time graph of a moving body.
     (iii)   Write two advantages of graphical representation of variation of velocity with time over
     tabular representation of velocity and time.
17   Balwinder was a small farmer. As his field was rainfed, he could not take the risk of growing   3
     specialized crops. He used to mix the seeds of two crops and sow in the field. Kaku, his son,
     who had passed class IX suggested to grow two or more crops simultaneously in a definite
     pattern to improve production. Balwinder followed and the productivity per unit area
     increased.
     (i)   Name the cropping pattern which Balwinder used earlier and the one suggested by
              Kaku.
     (ii)   Write two advantages of practising the pattern suggested by Kaku.
     (iii)   Why did Balwinder accept his son's suggestions ?
18   How can poultry farming be integrated with crop production ?   3
     How improved poultry breeds are developed in poultry farming ?
19   List six physical properties of non-metals. Name two non metals. Name a non - metal that is   5
     liquid at room temperature.
20   (a)   Define Melting point. Describe an activity with labelled diagram to find melting point   5
     of ice.
     (b)   Explain why temperature remains same during melting of ice.
21   Identify the following tissues :   5
     (a)   The epithelial tissue which has pillar like tall cells.
     (b)   The cells of this tissue are filled with fat globules.
     (c)   The movement of this tissue pushes the mucus forward to clear respiratory tract.
     (d)   It gives buoyancy to lotus to help it afloat.
     (e)   This tissue is present in lung alveoli.

(a) State the reason why a small mass of bullet fired from a gun kills a person.   5

(b) A bullet of mass 4 g fired with a velocity of 50 ms^{-1} enters a wall up to a depth of 10 cm. Calculate the average resistances offered by the wall.

(c) How will the depth of penetration into the wall change if a bullet of mass 5 g strikes against it with a velocity of 40 ms^{-1}? Give reason to justify your answer.

23   5

(a) Write the formula to find the magnitude of gravitational force between earth and an object on earths' surface.

(b) Derive 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

24 Describe briefly about the traits and their utilities important for improvement of varieties of a   5 cereal crop.

SECTION - B

25 A student wants to test for adulteration in yellow dal. Which reagent he should use to test it :   1
(a) Iodine solution   (b) Safranin
(c) Methylene Blue   (d) conc hydrochloric acid

26 Rohit was trying to test the presence of starch in potato extract. He forgot the reagent with   1 which starch gives blue black colour. Help him to select the correct stain from the following :
(a) Safranin   (b) Methylene blue
(c) Iodine solution   (d) Eosin

27 In the diagrams given below 'A' is a mixture of iron and sulphur and 'B' is the product   1 obtained by strongly heating the mixture 'A' and crushing it to a fine powder. What is the correct conclusion of observations shown by following diagrams ?
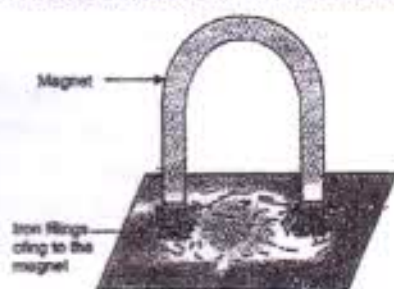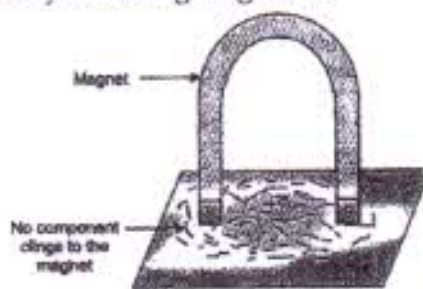
Sample A   Sample B

(a) Constituent particles retain their properties in a mixture.
(b) Constituent particles Fe and S retain their properties in a compound.
(c) Properties of constituent particles change in a mixture.
(d) Properties of constituent particles change in a compound formation.

28 Some properties of a compound are given below. The correct property   1 is :
(a) It is easy to separate components of a compound by physical methods.
(b) The elements in a compound do not retain their individual properties
(c) The proportion of the elements in a compound always varies
(d) The elements of a compound retain their properties to some extent.

29 When magnesium ribbon is burnt in air, the product formed mainly consists of :   1
(a) magnesium nitrate   (b) magnesium carbide

(c)   magnesium sulphide   (d)   magnesium oxide

30   The steps included for preparing a temporary mount of human cheek cell are :   1
(i)   With the help of a toothpick, scrape the inner side of cheek to collect squamous epithelial cells.
(ii)   Rinse the mouth with water
(iii) Put a drop of glycerine on the slide
(iv)   Add a few drops of stain methylene blue
(v)   Place a coverslip gently over the slide
Correct sequence of steps is -
(a)   (v)-(iv)-(iii)-(ii)-(i)   (b)   (ii)-(i)-(iv)-(iii)-(v)
(c)   (iv)-(iii)-(i)-(v)-(ii)   (d)   (ii)-(iv)-(iii)-(i)-(v)

31   Given below are diagrams of plant cells. The diagram which represents parenchyma is :   1
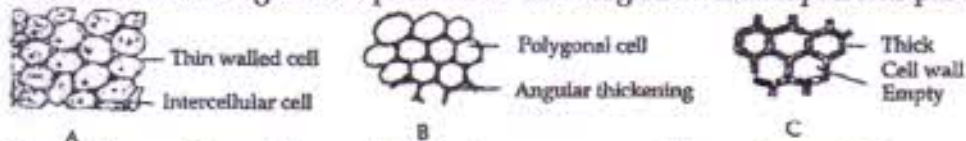
(a)   A   (b)   B   (c)   C   (d)   A as well C

32   The mixture which cannot be separated by the process of sublimation   1
is :
(a)   sodium chloride and ammonium chloride.
(b)   iodine, and potassium chloride.
(c)   sodium chloride and potassium chloride.
(d)   naphthalene, and sodium chloride.

33   In a spring balance there are 50 divisions between 0 and 100 gwt. Its least count is :   1
(a)   0.2 gwt   (b)   2 gwt
(c)   20 gwt   (d)   200 gwt

34   You are given aqueous solutions of sodium chloride and chalk powder. How would you distinguish   2
between the two without tasting ?

35   If in the determination of melting point of ice, the ice is contaminated with some non-volatile   2
impurity like common salt, how will the melting point of ice be affected ? Give one practical
application of this fact.

36   A student recorded the mass of dry raisins as 6.0g and mass of raisins after soaking them in   2
water for about four hours as 10.5g. Calculate the percentage of water absorbed by raisins.
Why do raisins get swelled up ?

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