Shipra Jha
IX- B

3/10

GTPDVUO

SUMMATIVE ASSESSMENT – I, 2015-16

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

SECTION-A

B 1 Name the process by which CO_2 and O_2gases get exchanged across the cell and its external environment. 1

P 2 When a man jumps out from a boat to the bank of the river the boat moves backwards. Identify the action and reaction in this situation. 1

P 3 State the relation between 'g' and 'G'. 1

C 4 State the principle used to separate two immiscible liquids of a mixture. Draw a neat and labelled diagram of the apparatus used. 2

B 5 Name the muscular tissue which is present in the iris of the eye. What is the shape of these cells ? 2

P 6 Write first equation of motion. Using the same equation find the final velocity of an object 2

which reaches at destination in 2 s after starting its its journey from rest and accelerates at m/s^2.

7 Define distillation. What type of liquids (substances) can be separated by this process ? 3

8 Name the term used for the following : 3
(a) Conversion of vapour to solid
(b) Conversion of solid to liquid
(c) Conversion of vapour to liquid

9 Define diffusion. Explain this phenomenon with the help of an example. 3

10 Do all cells in our body look alike in terms of shape, size and structure? Explain with the help of examples. What similarities do they have? 3

11 (a) Why are complex tissues called so ? 3
(b) Write names of different types of complex tissues.
(c) State the function of these tissues.

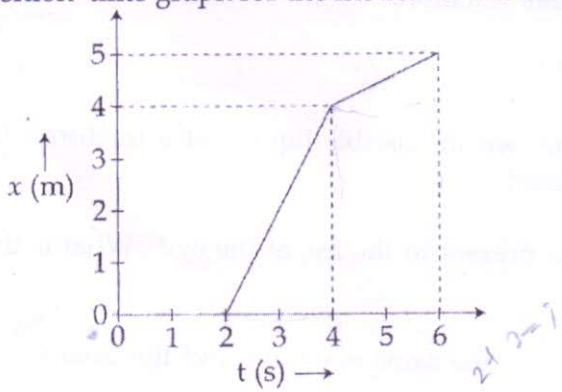
12 What do you understand by inertia? Do all bodies have the same inertia? Illustrate giving an example. 3

13 (a) A force of 20 N acts upon a body whose weight is 9.8 N. What is the mass and acceleration produced in the body ? ($g = 9.8\ m/s^2$) 3
(b) Write any one difference between mass and weight of a body.

14 Explain why, the motion of a body which is moving with constant speed in a circular path is said to be accelerated ? The minute hand of a clock is 7 cm long. Find the displacement and the distance covered by it from 9.00 am to 9.30 am. 3

15 (a) Arrange the following speeds in increasing order : 3
(i) 10 m/s (ii) 200 m/min (iii) 30 km/h
(b) A body starting from rest travels with uniform acceleration. If it travels 100 m is 5 s, what is the value of acceleration ?

16 The position-time graph for the motion of a car is given below : 3



(a) How far the car travelled in the time interval 2 to 6 s ?
(b) During which interval of time its speed was more ?
(c) Calculate the average speed of the car.

17 Rahul and Rachna were practicing floriculture in their farm. They sold the flowers to florists in India. They felt that if they start bee keeping too, thier income will increase. They obtained more information from the local officer. 3
(i) What is pasturage and how is it related to quality of honey ?
(ii) Name a bee variety which is commonly used for commercial honey production.
(iii) Why society would appreciate Rahul and Rachna ?

18 (a) Name the shell fish which is cultured to obtain pearl. 3
(b) Mention five marine fishes of high economic value.

19 Differentiate between an element and a compound. Categorize the following substances into elements and compounds- sodium chloride, Iodine, water, 24 carat gold, Oxygen gas, Carbon. 5

20 (a) Define evaporation and explain the role of speed of wind at the rate of evaporation. 5
(b) Why do we feel cool when we sit under fan during summer ?

21 (i) Who discovered cell? Which major invention led to the discovery of the microscopic world? 5
(ii) Name a single cell which may constitute a whole organism. What are they called?
(iii) Every multi - cellular organism has come from a single cell. Justify the statement.

22 (a) A person weighs 110.84 N on moon, whose acceleration due to gravity is 1/6 of that earth. If the value of 'g' on earth is 9.8ms^{-2}. Calculate. 5
(i) 'g' on moon.
(ii) mass of person on moon
(iii) weight of person on earth
(b) How does the value of g on the earth is related to the mass of the earth and its radius ? Derive it.

23 A bike moves with a constant velocity of 5 m/s for 10 s and then its velocity increases to 10 m/s in the next 5 s. Thereafter its velocity decreases at a uniform rate until it comes to rest after 10 s. Express this entire run of the bike on the velocity-time graph. From the graph : 5
(a) Identify the time interval when the bike was accelerating.
(b) Find the distance travelled in the last 10 s.

24 (a) Define weed. Give two examples. 5
(b) Why is it essential to remove weeds from agricultural fields ?
(c) What are weedicides ?

SECTION - B

B 25 Four students were given 2 mL each of different food samples in test tubes. They added 4 drops of conc. hydrochloric acid in each test tube. They observed that in one sample the colour of the solution became pink. This means :

(a) The sample which turned pink is adulterated
(b) The samples which didn't turn pink are adulterated
(c) The sample which turned pink is not adulterated.
(d) None of the samples is adulterated.

B 26 Yellow brown is the colour of a reagent named : 1

(a) dil HCl (b) safranin
(c) Iodine solution (d) dil sodium hydroxide

C 27 Colour of iron sulphide formed on strong heating of iron filings and sulphur powder is : 1

(a) grey (b) black
(c) yellow (d) colourless

C 28 A mixture containing iron filings and sulphur powder is spread on the white paper and a magnet is rolled in it. The particles which cling to the magnet are : 1

(a) Sulphur (b) Iron particles
(c) Iron sulphide (d) Mixture of iron and sulphur

C 29 Before burning in air magnesium ribbon is rubbed with sand paper. This is done because magnesium ribbon : 1

(a) is very hard and may not burn.
(b) undergoes chemical change on being rubbed with sand paper.
(c) may have oxide or carbonate layer which may hinder its burning.
(d) will become more reactive.

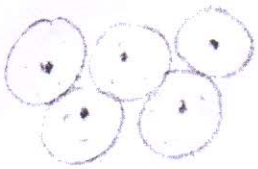
B 30 1

The thin peel of onion is placed in a watch glass containing water because :

(i) It prevents the peel from folding
(ii) It prevents the entry of air bubbles into it
(iii) It prevents the peel from drying
(iv) It helps in better staining of the peel

(a) (i) and (ii) (b) (i) and (iii)
(c) (ii) and (iii) (d) (i) and (iv)

Four students observed parenchyma tissue and drew following diagrams. Which one is correct ? 1

(a) 

(b) 

(c) 

(d) 

C 32 A mixture contains iodine, ammonium chloride and sand. Only iodine and ammonium chloride sublimate. Only iodine dissolves in carbon tetra chloride.How will you separate the three components ? Sequence of steps will be : 1

(a) Sublimation, addition of CCl_4.
(b) Addition of CCl_4, filtration, sublimation.
(c) Sublimation, addition of H_2O, filtration.
(d) evaporation, distillation, crystallization.

P 33 When the wooden block moves on the surface of a table, the direction of the force of friction is : 1

(a) vertically upwards
(b) vertically downwards
(c) horizontal, in the direction of motion
(d) horizontal, opposite to the direction of motion

C 34 Summer time is the time for soft drinks. We love to take lemonade, squashes, cold drinks, and panna etc. Make a list of drinks you have and classify them as true solution suspension and colloids. 2

C 35 For noting down the melting point of ice, state the correct method of taking the thermometer reading? 2

B 36 A group of students recorded the following readings while performing the experiment to calculate the percentage of water absorbed by raisins. Mass of dry raisins = 2.0 g 2
Mass of raisins after absorbing water = 3.0 g.
Calculate the percentage of water absorbed by raisins
Later on they placed swollen raisins in concentrated solution of sugar. What will be their observation ?

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