

N.K BAGRODIA

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17138H7

SUMMATIVE ASSESSMENT - I, 2016-17

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

- Cell Membrane is made up of organic molecules. Name them. 1
- Give one example of a situation in which a body has a certain speed but velocity is zero. 1
- Name the physical quantity which corresponds to the rate of change of momentum. 1
- How is heating of sugar and heating of ammonium chloride different from each other? Explain your answer. 2
- Name the type of parenchyma tissue present in aquatic plants. State its role. 2
- Give reason-stone falls towards the earth but earth do not rise towards the stone. 2
- (a) State the factor on which dilution or concentration of a solution depends. 3
- (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
- Distinguish among three states of matter with respect to the property indicated : 3
- | | |
|---------------------|---|
| (a) Density | 3 |
| (b) Diffusion | 3 |
| (c) Particle motion | 3 |
- Classify the following into elements, compounds and mixtures. Chlorine, blood, water, air, 3
- Classify the organisms on the basis of the number of cells. Give two examples of each. 3
- Animal tissues are different from plant tissues. State reason. 3

A gun of mass 3 kg fires a bullet of mass 30 g. The bullet takes 0.003 s to move through the barrel of the gun and acquires a velocity of 100 m/s. Calculate:

- (i) The velocity with which the gun recoils.
The force exerted on gunman due to recoil of the gun.
What is meant by free fall? $\sqrt{1/2}$
Why doesn't the moon fall into the earth by its attractive pull? $\sqrt{1/2}$

A fireworks shell is accelerated from rest to a velocity of 50 m/s over a distance of 0.250 m. Calculate the acceleration. How long will it take for acceleration to become zero? Explain your answer. Do action and reaction act on the same body or on different bodies? Explain your answer with the help of example. How are they related in magnitude and direction? Write the total momentum of the gun and the bullet before firing.

The weight of a body on the surface of the earth is 392 N. What will be the weight of this body on a planet whose mass is double that of the earth and radius is four times that of the earth?

Kishore's mother treated their cattle as their family members. She took care of proper cleaning and shelter facilities, provided balanced ration but despite this one day she observed that one of the cow stopped taking food and didn't have normal posture. She was sad and felt guilty. Kishore pacified her and explained to her that it was not her fault.

(i) Mention two possible reasons of illness of cattle.

(ii) State how farm animals can be protected against diseases?

(iii) State two values in Kishore's mother's behaviour that should be imbibed by all.

(iv) Name three weed plants and mention their scientific names.

You are given a mixture of alcohol and water. Explain the process to separate it into its constituents. Draw a labelled diagram of the technique used.

(a) Define evaporation. Out of nylon and cotton clothes, which will be more comfortable during summer and why?

(b) Is evaporation and boiling the same? If not then why?

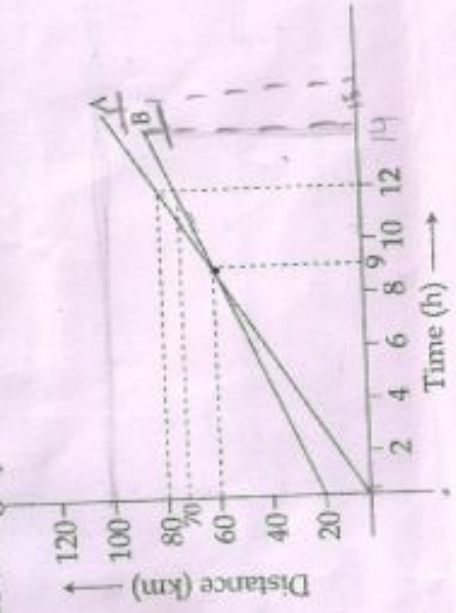
Write four characteristic features of Parenchymatous tissues. How would you classify this tissue based upon its specialised functions? What are these functions?

(a) For a moving object, derive graphically relation between final velocity v , initial velocity u , acceleration a and time t .

(b) Draw the distance-time graph for the following situations:

- (i) When a body is stationary.
(ii) When a body is moving with a uniform speed.
(iii) When a body is moving with non-uniform speed.

Distance-time graph below represents the motion of two buses A and B:



- Initially by what distance bus B is ahead of bus A ?
 Do they ever meet each other ? If so when.
 Distance travelled by bus A when it overtakes bus B.
 Distance by which bus A at $t = 12$ h.
 Which one of them is moving faster ? Give reason.
 Define animal husbandry.
 Mention four ways by which health of animals can be maintained during cattle farming.

5

SECTION - B

1

The steps of the procedure to be followed for testing the presence of adulterant metanil yellow in a dal are given below :

- Take 2 mL of this sample solution in a test tube
- The solution turns pink
- Soak the sample dal in a beaker by adding distilled water
- Add a few drops of conc. HCl in the test tube

The correct sequence of these steps would be :

- (A), (C), (D), (B)
- (C), (A), (D), (B)
- (C), (D), (A), (B)
- (A), (D), (C), (B)

1

In a sample of food to observe the positive test for starch, Rohit should use the sample of

- Sugar
- Boiled egg's white part
- Potato
- Apple juice

1

Mohit dissolved a mixture of iron filings and sulphur in carbon disulphide, in a clean test tube. He observed that the colour of solution becomes :

- grey
- red
- black
- yellow

1

A magnet is repeatedly moved closely over a mixture of iron filings and sulphur powder. The correct observation from the following would be :

- no effect on magnet.
- iron filings stick to the magnet.
- iron with sulphur stick to the magnet.
- magnet attracts very little iron.

1

The gas evolved during reaction of zinc with dil sulphuric acid is :

- supporter of combustion
- self combustible
- non-combustible
- soluble in water

1

To observe the cells in an onion peel we must prepare the slide by mounting on it :-

- Crushed pulp of onion
- Green leaf of onion
- Thin layer of fleshy leaf of onion
- Dry scales of onion

1

Which of the following is the characteristic feature of parenchyma tissue ?

- Cells are thin walled and loosely packed
- Cells have thickenings at corners
- Cells are thick walled
- Cells are long, narrow, without intercellular space

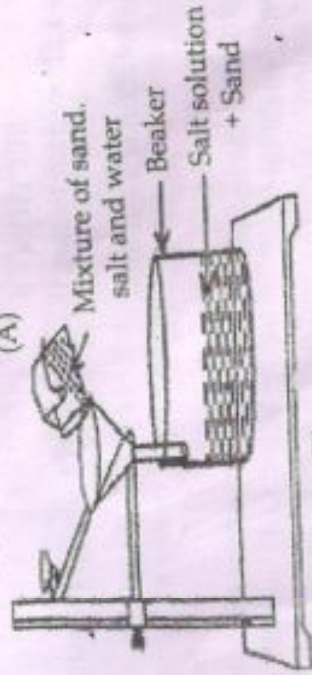
1

Three students were asked to separate sand from a mixture of sand and salt. They were provided with water to dissolve the salt in it and then filtering the mixture. The student whose experimental set up is correct was :

32



(A)



(B)



(C)

(a) A (b) B (c) C (d) None

A student was measuring minimum force required to just move a wooden block on a horizontal surface using a spring balance of least count 2 gwt. When he checked the spring balance, he observed that its pointer was 2 divisions below the zero mark on the scale. He performed the experiment and observed that when block just starts moving, the pointer is at 32nd division on the scale. He calculated the force applied. Its correct value will be :

- (a) 60 gwt (b) 68 gwt
(c) 64 gwt (d) 32 gwt

While making a colloidal solution of starch in water why is constant stirring required ? 2

Should we add dry corn starch to boiling water or boiling water to corn starch? Why? 2

Write melting point of ice and boiling point of water in degree Celsius and Kelvin scale. 2

Write the formula for determining the percentage of water absorbed by raisins? State one important precaution for this experiment. 2