

SUMMATIVE ASSESSMENT –I (20114)

SCIENCE CLASS – IX

Time : 3 hrs.

M.M. : 90

General Instructions:

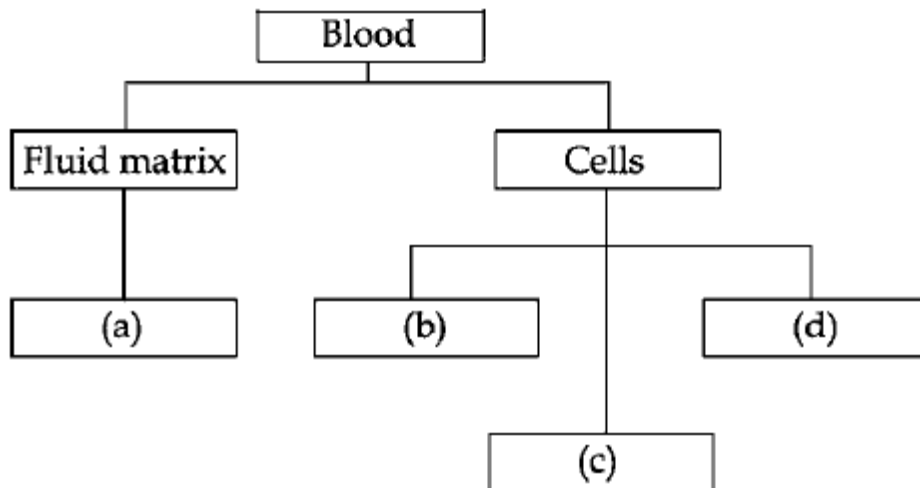
- The question paper comprises of two Sections, A and B. You are to attempt both the sections.
- All questions of Section-A and all questions of Section-B are to be attempted separately.
- Question numbers 1 to 3 in Sections-A are one mark questions. These are to be answered in one word or in one sentence.
- Question numbers 4 to 6 in Sections-A is two marks questions. These are to be answered in about 30 words each.
- Question numbers 7 to 18 in Sections-A is three marks questions. These are to be answered in about 50 words each.
- Question numbers 19 to 24 in Sections-A is five marks questions. These are to be answered in about 70 words each.
- 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.
- Question numbers 34 to 36 in Section-B are questions based on practical skills are two marks questions.

SECTION – A

- Q.1** Which cell organelle can be called the export house of the cell ? (1)
- Q.2** What is the numerical ratio of average velocity to average speed of an object when it is moving along a straight path ? (1)
- Q.3** Name the process by which green plants make their own food ? (1)
- Q.4** Among solids, liquids and gases, which one has :
- (a) maximum force of attraction between the particles
- (b) minimum spaces in between constituent particles. Give reason in support of your answer. (2)
- Q.5** Two objects A and B of same masses and velocities V and $3V$ respectively are in motion.
- (a) Which object will have larger momentum ?
- (b) Give reason to support your answer 'a'. (2)

Q.6. Mention the different components of blood ?

(2)



Q.7 Draw a well labelled diagram to show the process of fractional distillation.

(3)

Q.8 Write two properties of colloidal solution . Name the two components of such solution and name the property by virtue of which it scatters light.

(3)

Q.9 Mallika's mother was suffering from cold and cough. Mallika prepared tea for her mother. She boiled water in a pan, and then she added tea leaves, sugar and milk to it. She filtered the tea in a cup and served to her mother.

(a) Explain the values shown by Mallika.

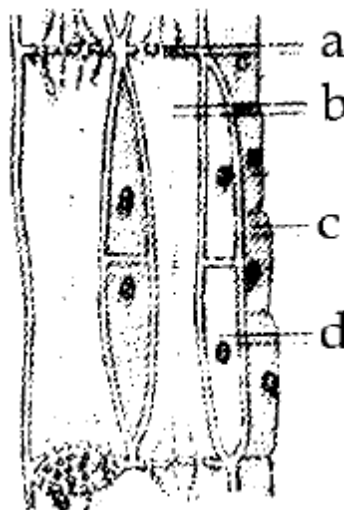
(b) Identify solute, solvent, residue and filtrate in this activity.

(3)

Q.10 (a) Name the tissue in the following figure :

(b) Identify parts 'a', 'b', 'c' and 'd'.

(3)



Q.11 Draw a neat and well labelled diagram of the neuron cell.

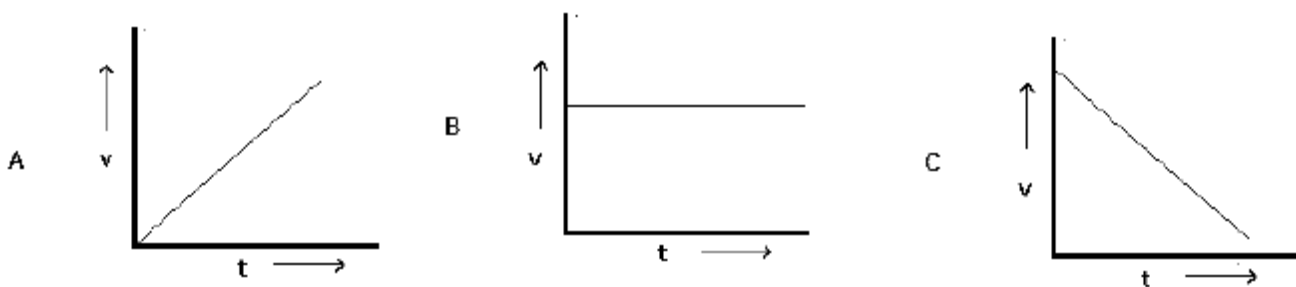
(3)

Q.12 (i) Is the acceleration due to gravity of earth 'g' always a constant ? Discuss.

(ii) During a free fall will heavier objects accelerate more than lighter ones ?

(3)

Q.13 What type of force is acting in the cases given below? (3)



Q.14 State universal law of gravitation. Use it to find the value of acceleration due to gravity at a height h above the earth's surface. (3)

Q.15 If a bus is moving to the left (has a negative velocity), slows down, and then comes to a stop.

- (a) What is the direction of its acceleration? Is the acceleration positive or negative? (3)
- (b) What is the sign of an acceleration that reduces the magnitude of a positive velocity? (3)

Q.16 State the meaning of Layers. Why limestone is added in their diet? Name one other dietary requirement of poultry birds. (3)

Q.17 What are pesticides? Give two reasons to explain, why excessive use of pesticides is not advisable. Suggest any two measures that may be taken to control pests. (3)

Q.18 Write two macro and micro nutrients needed for the growth of plants. How would the plants be affected, if they are deficient in the soil? (3)

Q.19 (a) List three characteristics of particles of matter. When we add some sugar or salt in a beaker containing water, after sometime the sugar or salt becomes invisible. Where does it go? What property of particle of matter does it show? (5)

(b) How will you justify that ice water and steam are the three states of a substance and not different substances

Q.20 (a) What volume of ethyl alcohol and water must be mixed together to prepare 250 ml of 60% volume by volume solution of alcohol in water.

(b) Mention any two differences between compounds and mixtures.

(c) Which separation technique will you apply for separating the following mixtures:

- (i) Butter from curd.
- (ii) Different pigments from an extract of flower petals. (5)

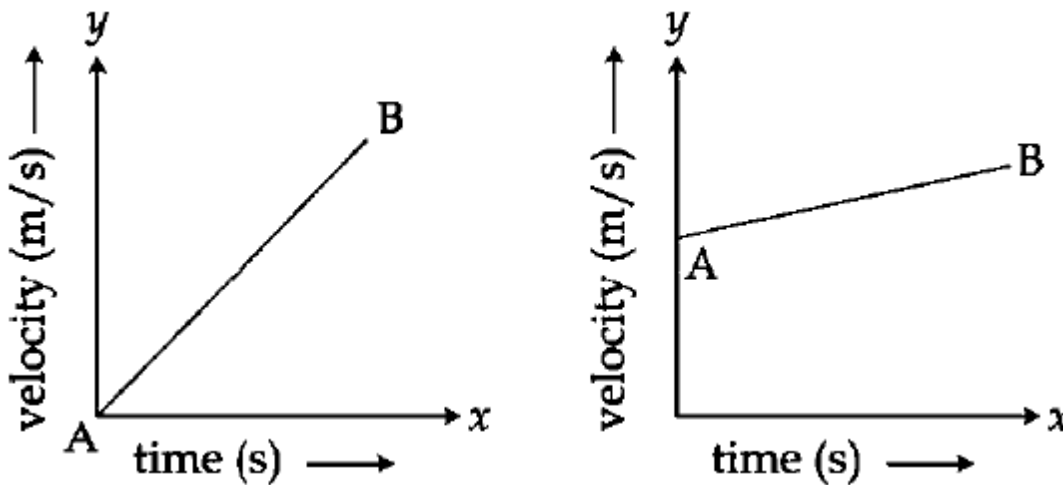
Q.21 a) Draw a neat diagram of an animal cell and label the parts whose functions are as follows :

- (i) helps in storage modification and packaging of products in vesicles.
- (ii) helps in keeping the cell clean by digesting worn-out cell organelles.
- (iii) helps in oxidation of glucose to produce energy in the form of ATP.

(iv) allows the entry and exit of some materials into and out of the cells.

(b) Define nucleoid. (5)

Q.22 (a) Give one similarity and one dissimilarity between the two graphs. (5)



(b) What do you understand by the term acceleration ? When is it positive and when is it negative ?

Q.23 (a) Newton's first law of motion is also called law of inertia. Justify this statement

(b) A plastic ball and a cricket ball are rolled on the floor with same velocity. Which one will cover larger distance before stopping ? Give reason.

(c) A truck is moving with a velocity of 72 km/h and it takes 3s to stop after the brakes are applied. Calculate the force exerted by brakes. Mass of truck is 1200 kg. (5)

Q.24 (a) List six factors for which the variety improvement of crops is aimed at ?

(b) Explain two advantages of mixed cropping. (5)

SECTION – B

Q.25 Food samples taken by four students A, B, C, D to test the presence of starch are : (1)

- | | |
|--------------------------|--------------------------|
| (A) grape juice | (B) lemon juice |
| (C) soup of mixed pulses | (D) Rice extract (Maand) |

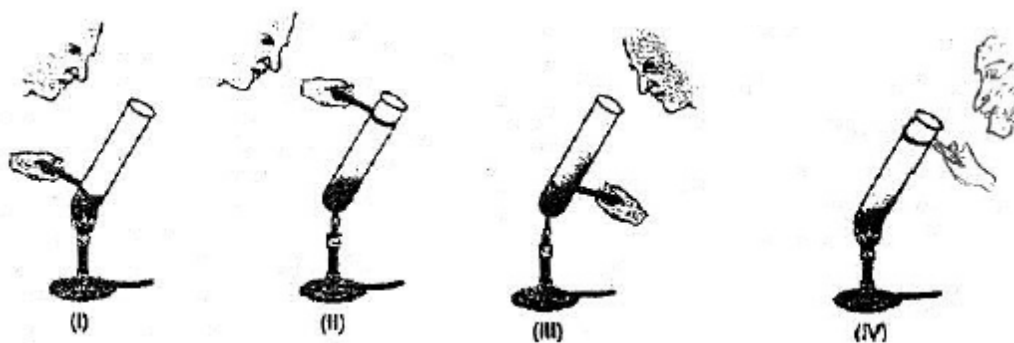
The student who will be able to obtain positive result is :

- (a) A (b) B (c) C (d) D

Q.26 To observe starch granules in potato under a microscope, freshly cut surface of potato was pressed on a slide. The stain that will show starch granules clearly is: (1)

- (a) Acetocarmine (b) Iodine (c) Safranin (d) Eosin

Q.27 Four students were asked to observe the effect of heat on Iron sulphide. The teacher provided them with test tubes, holders and solid Iron sulphide. The students then started heating iron sulphide as shown below. The teacher stopped three of them for using wrong procedures. The correct way of heating is shown in setup : (1)



- (a) I (b) II (c) III (d) IV

Q.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

Q.29 When a piece of magnesium ribbon is brought near the flame of Bunsen burner, it is observed that : (1)

- (a) Tip of the magnesium ribbon becomes red hot but it does not burn with a flame.
 (b) The magnesium ribbon burns with a dazzling white flame.
 (c) The magnesium ribbon melts.
 (d) Lot of smoke is produced.

Q.30 Following four slides were given for observation under the microscope. The correct identification of the slides is : (1)



(A)



(B)



(C)



(D)

- (a) (A) human cheek cells (B) sclerenchyma (C) onion peel cells (D) parenchyma
 (b) (A) parenchyma (B) human cheek cells (C) onion peel cells (D) sclerenchyma
 (c) (A) human cheek cells (B) parenchyma (C) onion peel cells (D) sclerenchyma
 (d) (A) onion peel cell s (B) cheek cells (C) parenchyma (D) sclerenchyma

Q.31 The striped muscle fibres are : (1)

(a) Spindle shaped and uninucleate

(b) Cylindrical without nuclei

(c) Cylindrical with striations and many nuclei

(d) Cylindrical and uninucleate.

Q.32 A mixture contains only Iodine, Ammonium chloride and Sand. Only Iodine and Ammonium chloride sublime. Only Iodine dissolves in carbon tetra chloride. How will you separate the three components? Sequence of steps will be (1)

(a) By sublimation addition of CCl_4

(b) Addition of CCl_4 , filtration, sublimation

(c) Sublimation, addition of H_2O , filtration.

(d) evaporation, distillation, crystallization

Q.33 Range of a spring balance used for measuring the minimum force required to just slide a block is 0-500 gwt. And it has a total of 20 divisions between 0-100gwt marks. Its least count is – (1)

(a) 5 gwt

(b) 20 gwt

(c) 0.4 gwt

(d) 0.2 gwt

Q.34 A mixture of sand, powdered glass and common salt is dissolved in water and then filtered. Name the substance left on filter paper. Name the substance in the filtrate. (2)

Q.35 While doing an experiment to determine the boiling point of water, a student heated water in a beaker and observed that when water starts boiling the temperature remains constant. State reason. Where does the heat energy go? (2)

Q.36 5g of raisins were placed in distilled water for 24 hours. The mass of soaked raisins was found to be 7g. Calculate the percentage of water absorbed by raisins. (2)