

APEEJAY SCHOOL, SCHOOL, SHEIKH SARAI-I

SCIENCE Class – IX

Time Allowed : 3 hours

Maximum Marks : 90

General Instructions :

The question paper comprises of **two Sections, A and B**. You are to attempt both the sections.

All questions are **compulsory**.

All questions of **Section-A** and **all** questions of **Section-B** are to be attempted separately.

Question numbers 1 to 3 in Section-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 are two marks questions. These are to be answered in about 30 words each.

Question numbers 7 to 18 in Section-A are three marks questions. These are to be answered in about 50 words each.

Question numbers 19 to 24 in Section-A are 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.

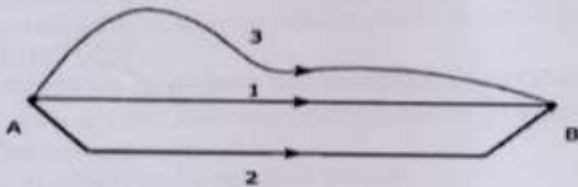
Each question is a one mark question. You are to select one most appropriate response out of the four provided to you.

Question numbers 34 to 36 in Section-B are questions based on practical skills are two marks questions.

SECTION-A

1. Name two cell organelles which have their own DNA and Ribosomes. 1

2. A person standing at A goes to B by following any of the paths 1, 2 or 3. Which path we can measure to find the average velocity ? 1



3. Distinguish between intervarietal and interspecific hybridisation of crop plants. 1

4. Classify the following into element, compound and mixture.
Brass, gold, hydrogen sulphide, air 2

5. How does the bone matrix differ from the matrix of cartilage ? 2

6. A body of mass 10 kg is taken to the centre of earth. What will be its mass and weight there ? 2

SUMMATIVE ASSESSMENT – I, 2023
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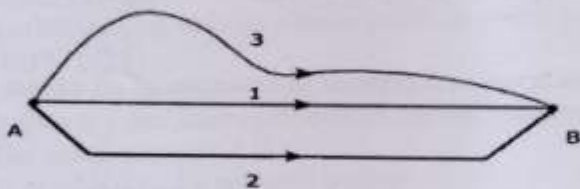
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- (b) Give two reasons to justify that an Iron almirah is a solid at room temperature.
(c) What happens to the heat energy which is supplied to the solid once it starts melting.

20. (a) How does a solution of sugar in water is different from a solution of starch in water with respect to : 5

- (i) Tyndall effect
(ii) Filterability and
(iii) appearance ?

(b) Name the technique used to separate the following :

- (i) salt from sea water
(ii) cream from milk
(iii) iron pins from sand
(iv) different pigments from an extract of flower petals.

21 (a) Show the diagrammatic representation of the location of lateral meristem and intercalary meristem tissue in plant body. 5

(b) Name the meristem responsible for the increase of girth of root or stem.

(c) Write two differences between meristematic and permanent tissues in a tabular form.

22. (a) Prove that if the earth attracts two bodies placed at the same distance from the centre of earth, with equal force; then their masses will be the same.

(b) Mathematically express the acceleration due to gravity that is ^{Experienced} expressed by a free falling object. 5

(c) Why is 'G' called a universal constant ?

23. State the law of conservation of momentum. 5

A bullet of mass 10g moving with a velocity of 400m/s gets embedded in a freely suspended wooden block of mass 900 g. what is the velocity acquired by the block?

24. Define genetically modified crops. How are they made ? Explain the significance of genetically modified crops with suitable example. 5

SECTION - B

samples
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

26. Given below are the four methods of testing the presence of metanil yellow in a given sample of arhar dal. The correct method is : 1

- (a) 5g of dal is added to 5g metanil yellow
(b) 5g of dal is added to 5 mL of water along with 2 drops of conc. hydrochloric acid.
(c) 5g of boiled dal is added to 5 mL of water
(d) 5 g of dal is added to 5 mL of diluted hydrochloric acid

27. To prepare iron sulphide, by heating a mixture of iron filings and sulphur powder, we should use a :- 1

- (a) Copper dish (b) Watch glass
(c) China dish (d) Petri dish

28. A mixture of iron filings and sulphur powder is heated. The colour of mixture will change: 1
(a) Black to yellow (b) Yellow to black
(c) Black to brown (d) Brown to yellow
29. When zinc reacts with dilute sulphuric acid 1
(a) a colourless, and odourless gas evolves
(b) a reddish brown gas evolves
(c) a pungent gas evolves
(d) a gas with smell of rotten eggs is released.
30. For making a temporary mount of an onion peel cells. Seema wrote down the steps and showed it to her teacher. Arrange the steps in correct sequence : 1
(a) Take a clean slide and put a drop of glycerine on it
(b) Take a scaly part of the onion from the convex side of the onion and place it in water in a petridish
(c) Add a drop of safranin
(d) Mount the specimen and cover it with a cover slip
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.
32. A mixture can be characterized by : 1
(a) No fixed composition of the components.
(b) Homogeneity.
(c) No occurrence of chemical reaction.
(d) Heterogeneous
33. While performing an experiment to establish the relationship between weight of a rectangular wooden block lying on a horizontal table and the minimum force required to just move it using a spring balance, if the weight of block is 73gwt then the most suitable spring balance will be of : 1
(a) least count 1 gwt, range 100 gwt
(b) least count 2.5 gwt, range 100 gwt
(c) least count 2.5 gwt, range 500 gwt
(d) least count 2 gwt, range 100 gwt
34. Rima took fine chalk powder, egg albumin starch powder and alum powder in four test tubes A, B, C and D respectively. After adding water to all the four test tubes, identify the four test tubes as solution, suspension and colloid. 2
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
36. Prakash soaked 6g raisins in water and after 10 hours found that their mass has become 9g. Determine the percentage of water absorbed by raisins. 2