

## SUMMETIVE ASSESSMENT – II (SAMPLE PAPER) SCIENCE CLASS – IX - 3

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### SECTION-A

- Write the symbol and latin name for the following elements : (a) Sodium (b) Potassium
- Why did Rutherford select gold foil for his  $\alpha$ -particle scattering experiment ?
- An organism does not have a well defined nucleus and organelles. State its kingdom.
- How moths of certain families are able to escape capture from bats? What is the range of frequencies associated with (a) infrasound (b) ultrasound ?
- Name any two forms of energy. Define the SI unit of energy.
- (a) Write difference between  $O_2$  and  $2O$ .  
(b) Give one example in each of the following cases :  
(i) Monoatomic molecule (ii) Diatomic molecule (iii) Tri atomic molecule (iv) Tetraatomic molecule
- (a) Which of the following species have 18 electrons ?  $Ca^{+2}$  ,  $K^{-1}$  ,  $Na^{+1}$  ,  $Cl^{-1}$  , Ar  
(b) Chemical properties of all the isotopes of an element are similar. State reason.
- (a) Why chemical properties of all the isotopes of an element are same ? (b) Name the isotopes used in the treatment of Goitre and Cancer. (c) An element 'X' has 2 electrons in its M shell. What is its atomic number ?
- Most mammals give birth to young ones. (a) How do they nourish their young ones ? (b) Name two egg-laying mammals.
- Which part of the body is attacked by the bacteria causing tuberculosis ? If they enter :  
(a) through the nose (b) through the mouth
- Given below are few situations :  
(i) Geeta of Class IX was having common cold. She sits with Sarika who also develops the diseases.  
(ii) Animesh of Class IX shifted to a new residence, with his family, where water purification system has not been installed yet. He develops Cholera and dysentery.
- Associate these situations with their mode of transmission and assign appropriate category to them.  
An object of mass 50 kg is raised to a height of 10 m above the ground. Find the potential energy of the object at its highest point. If the object is allowed to fall freely, what is its kinetic energy when it is half way down. Give reason to justify your answer. ( $g = 10 \text{ m/s}^2$ )
- (a) Explain why a ship made of steel floats on water but a steel needle sinks.

(b) Pin and nails are made to have pointed ends. Why?

14. Define the three characteristics of sound.

15 . (a) Loaded test-tube placed in pure milk sinks to a certain mark (M). Now some water is mixed with the milk. Will the test-tube sink more or less ? Explain. (b) What is lactometer ?

16. One day Tanvi saw from the window of her room that a "Bansuri wala" was going through the street. Tanvi bought the "Bansuri (flute) from him. She started playing with flute and was surprised to hear the musical sound produced by it. She asked her father about its working who explained the mechanism of production of musical sound by the flute.

(a) What type of waves are produced in the air column of flute ?

(b) What is the difference between a soft sound and a loud sound ? (c) What quality is shown by Tanvi ?

17. Define the following terms : (a) Atom (b) Molecule (c) Avogadro's number (d) Valency (e) Molar mass

18. (a) Name the scientist who introduced the system of scientific naming of organisms. What is this system called ? State its importance.

(b) Some scientific names are common to the names one normally uses to identify them. Give four examples.

19. Justify the following statements : (a) Availability of proper and sufficient food would prevent from infectious diseases “.

(b) “The general ways of preventing infection mostly relate to preventing exposure” List three points of prevention of exposure.

20. State Archimedes' principle. Why is it easier to swim in sea water than in river water ? Explain the reason that the cork floats in the water where as an iron nail sinks. 5

21 .With the help of an activity prove that the force acting on a smaller area exerts a larger pressure. 5

## SECTION – B

22 .Sound waves can travel :

a) In vacuum

(b) In any medium ✓

(c) Both in (a) and (b)

(d) Only in solid and gaseous medium

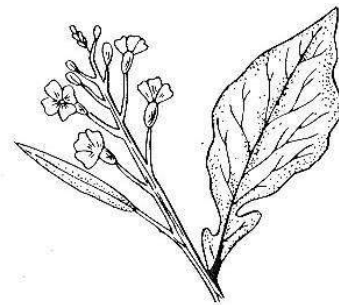
23. A force of  $5 \times 10^5$  N exerted by a truck produces a pressure of  $25 \times 10^5$  Pa on the ground. The area of contact of the tyres with ground is : (a)  $0.5 \text{ m}^2$  (b)  $0.75 \text{ m}^2$  (c)  $0.2 \text{ m}^2$  (d)  $5 \text{ m}^2$

24. A wave passes from one medium to another. Name the property of wave out of the following which varies.

(a) Frequency (b) Mass (c) Wavelength (d) Mass and wavelength

25. Identify the division to which the following plant belongs :

- (a) Bryophyta                      (b) Pteridophyta  
 (c) Angiospermae                (d) Gymnospermae



26. In order to verify the law of conservation of mass, we carry out chemical reactions in a closed container, so that

- (a) gaseous products do not escape      (b) heat transfer does not occur  
 (c) reactants do not mix with the products    (d) none of the above

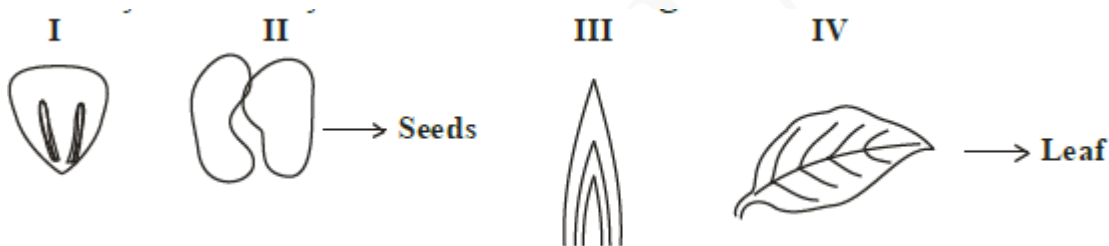
27. On heating 60 g of Calcium carbonate 26.4 g of carbon dioxide escapes. What will be the amount of residue left ?

- (a) 33.6 g (b) 12.6 g (c) 86.4 g (d) 26.4 g

28. Leaves of monocotyledonous plants often have :

- (a) cambium present                                      (b) dorsiventral leaves  
 (c) floral parts in units of four or five              (d) parallel venation

29. Identify monocotyledonous from the given sketches :



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

30. Which of the following statement is correct in respect of life cycle of Anopheles mosquito ?

- (a) The larvae feed on human blood.                      (b) Pupae feed on sugar meals.  
 (c) Male anopheles mosquito feeds on human blood.      (d) Female anopheles mosquito feeds on human blood.

31. (a) Define density and write an expression for it. (b) What is the S I unit of density ?

32. When an object is kept on a liquid, then two forces act on it. Name the two forces and their directions.

33. Out of the following given names of the specimens which is known as "farmer's friend". Write its two adaptive features L Cockroach , Earthworm , Fish , Bird,