SUMMATIVE ASSESSMENT – II (2015-16)
Class – IX SCIENCE

भाग-अ / SECTION-A

1 Mention the postulate of Dalton's atomic theory which can successfully explain the law of definite proportions. 1

2 What do you understand by an octet of electrons in the valence shell ? 1

3 Name any two diseases caused by protozoa. 1

4 Deifine longitudinal waves and write the form in which these waves propagate in a medium. 2

5 Calculate the electrical energy consumed in Joules if a toaster of 60 W is used for 30 minutes. 2

6 Find the number of of mole in : 3
(i) 176g Carbon dioxide
(ii) 12.044×10^{23} number of Carbon dioxde molecules
(iii) Oxygen atoms in 44g of carbon dioxide
(Atomic mass : C = 12 u, O = 16 u)

7 Define isotopes ? Why do isotopes have same atomic number but different mass number ? Explain with the help of an example. 3

8 There are two elements A_{13}^{26} and B_{14}^{26}. Find the number of sub-atomic particles in each of these elements. What is the relationship between the two ? 3

9 Who proposed the five kingdom classification of living organisms ? Name all the five kingdoms. 3

10 A rabid dog was seen in a colony and everyone was afraid of going near to it. Name the disease and state how this disease is transmitted ? The dog is presently considered the reservoir of the disease. What is the meaning of 'reservoir' here ? 3
What steps should the Government take to prevent the spread of the disease ?

11.Name two type of fishes based on their skeletons. Give one example of each

12 A block of glass is kept on a wooden board. The mass of glass block is 2 kg and its dimensions are 8 cm × 5 cm × 1 cm. Find the pressure exerted by the glass block on wooden board if it is made to lie on the board with its dimensions 3
(a) 5 cm × 1 cm (b) 8 cm × 5 cm

13 A ship sends out ultrasound produced by transmitter that returns from the sea-bed and detected after 3 sec. If the speed of ultrasound through sea water is 1530 m/s., find the distance of the sea-bed from the ship.

14 How is the power related to the speed at which a body can be lifted ? How many kilograms will a man working at the power of 100 W, be able to lift at constant speed of 1 m/s vertically ? (g=10 m /s2).

15. (a)Relative density of gold is 19.5.The density of water is 1000kg/m^3. Find the density of gold in SI unit and g/cc

(b) The radius of solid gold sphere is 0.25 cm. If the density of gold is 19.5 g/cc. calculate it's mass.

16. (a)Explain why no of atom in one mole of hydrogen gas is double the no of atom in one mole of helium gas?

(b)Explain atomic mass unit(c)How many atoms are present in (i) MnO_2 molecules (ii) CO molecules

17.Write the convention followed by writing the scientific name of organism. Write the scientific name of tiger

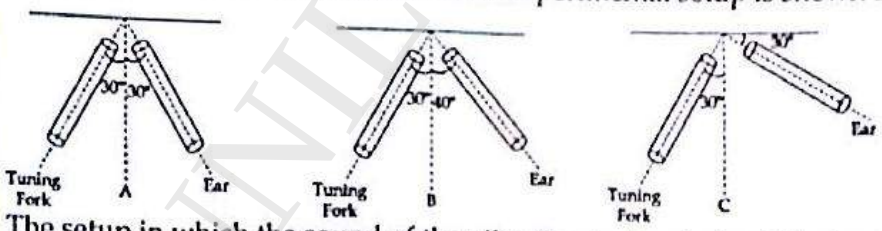
19. (a)What do the sign and symptoms indicate if person is suffering from any disease? (b) Based on the duration of diseases what are the differences between categories of diseases? Differentiate between them giving one example of each .

20. What is echo? State two condition for an echo to be heard. Bat cannot see , then how do they catch prey? Explain.

21. (a)An army tank weight more than hundred tons can easily move on road .Why? (b)Explain any three application of Archimedes principle

भाग- स /Section - C

25. Three students performed an experiment on verifying the laws of reflection of sound using a tuning fork as a source of sound. Their experimental setup is shown in figures A, B, and C.



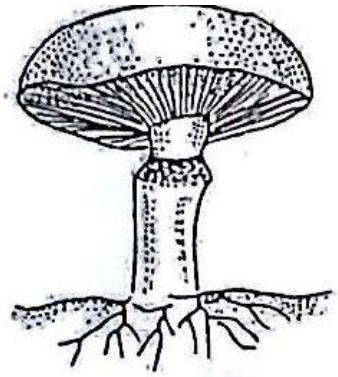
The setup in which the sound of the vibrating tuning fork will be heard the most clearly is :
(a) A (b) B (c) Both A and B (d) C

26 Jasmine is doing an experiment to find the pressure exerted by an iron cuboid of dimensions 3 cm x 6cm x 15 cm on loose sand. She will observe that iron cuboid exerts maximum pressure when it is placed on the sand with its sides of dimensions
(a) 6cm x 15cm (b) 15cm x 3cm
(c) 3cm x 6cm (d) 3cm x 15cm

27 Pulse is : 1

(a) wave of short duration.
(b) wave which repeats periodically.
(c) wave of continuous disturbance.
(d) wave of long duration.

28



The umbrella like spherical part of an agaricus is :

(a) pileus (b) stipe
(c) sporangium (d) gills

29 Given below is a chemical equation :

$2Mg + O_2 \longrightarrow 2MgO$

Mass of magnesium oxide formed by burning 24g of magnesium in air is :-

(Relative atomic masses, Mg=24u and O=16u) :

(a) 16g (b) 80g
(c) 20g (d) 40g

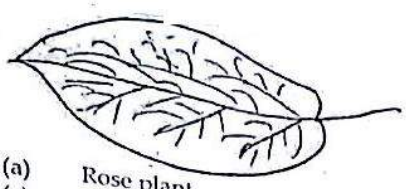
30 Which one of the following statements illustrate the Law of Conservation of mass in a reaction :

(a) When 1.70 g of $Pb(NO_3)_2$ solution when reacts with the solution of 0.365 g of NaCl then 1.435 g of $PbCl_2$ precipitate and 0.63 g of $NaNO_3$ are obtained.
(b) When 2.54 g of $CuSO_4$ solution is added to 2.46 g of Na_2CO_3 solution then 3.00 g of Na_2SO_4 and 3.02 g of $CuCO_3$ are obtained.
(c) When 3.04 g solution of $BaCl_2$ and 3.06 g solution of Na_2SO_4 react then 3.50 g of $BaSO_4$ and 2.50 g of NaCl are obtained.
(d) When 4.50 g $AgNO_3$ solution is added in 2.50 g of HCl then 3.00 g of AgCl and 3.50 g of HNO_3 are obtained.

31 Rohan was uprooting some plants to clean his garden. He found that it was easy to uproot them and the stem, that he was holding was hollow. The plant could be a :

(a) pteridophyte (b) monocotyledonous
(c) dicotyledonous (d) bryophyte

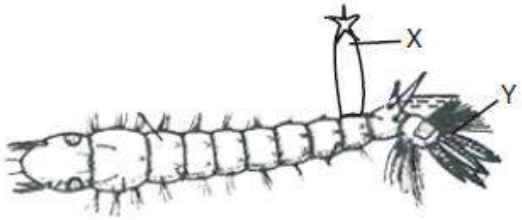
32. Leaves of which of following plant has reticulate venation in their leaves:



(a) Rose plant (b) Maize plant
(c) Grass (d) Wheat plant

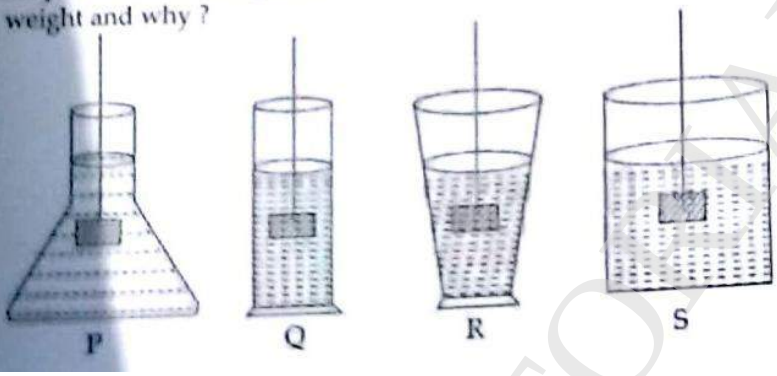
33

33. The correct level for X and Y in the diagram are:
(a) X = respiratory siphon, y = air floats
(b) X = respiratory siphon, y = tracheal gills
(c) X = tracheal gills , y = respiratory siphon
(d) X = air floats, y = respiratory siphon



34. If two balls made of iron and aluminium have equal volumes when immersed in a liquid, will the experience equal up thrust? Justify

35 To determine the loss of weight of a solid in water, a student used four vessels of different shapes as shown in figures below. In which vessel solid will experience the maximum loss in weight and why ?



2

36. Differentiate between male and female cockroach (2 point)

भाग-ब (मुक्त पाठ)/SECTION - B (OTBA)

(* Please ensure that open text of the given theme is supplied with this question paper.)

जलाशयों का संरक्षण/ Conservation of Water Bodies

22 किन्हीं चार अंतर्देशीय जल स्रोतों के नाम लिखिए। 2
Name any four inland water reservoirs.

23 जल स्रोतों के दुरूपयोग के मुख्य कारण क्या हैं? इनके लिये कौन सी आवश्यक सावधानियाँ ली जानी चाहिए? 3
What are the main causes of misuse of water bodies? What are the necessary precautions that need to be taken?

24 जल स्रोतों के प्रबंधन में सरकार तथा स्थानीय इकाइयों की भूमिका की आवश्यकता को समझाइये। एक उदाहरण वृत्त अध्ययन दीजिए। सुझाइये कि आप किस प्रकार जल स्रोतों के संरक्षण में बदलाव ला सकते हैं? 5
Explain the importance of Government and local bodies involvement with respect to water bodies management. Give an example/ Case study. Suggest how can you bring change in ways and means in conservation of water bodies.