KENDRIYA VIDYALAYA SANGATHAN, PATNA REGION

SUMMATIVE ASSESSMENT-2, 2015-16
CLASS – IX   SCIENCE

SECTION – A

1. Name the anion and cation which constitute the molecule of Aluminium chloride.

2. A battery lights a bulb. Describe the energy changes involved in the process.

3. Why bryophytes are called the amphibian of plant kingdom ?

4. (a) Define polyatomic ion.
   (b) Write the name of the compound $(NH_4)_2SO_4$.

5. Why is it difficult to hold a school bag having a strap made of a thin and strong string ?

6. If number of electrons in an atom is 8 and the number of protons is also 8, then , what is the atomic number and charge on the atom?

7. What are the differences between amphibians and reptilians ?

8. Define relative density. Relative density of silver is 10.8. Density of water is $10^3 kg\ m^{-3}$. What is the density of silver in S I Unit ?

9. Which of the following are isotopes and which are isobars ?
   Argon, Protium, Calcium, Deuterium.

10. Write appropriate terms for the following :
    (a) Plants without specialised vascular tissue.
    (b) Animals which have pseudocoelom.
    (c) Animals which have two chambered heart.

11. (a) Write the principles of treatment that are generally followed by a doctor to treat infectious diseases.
    (b) Write two ways by which HIV (AIDS Virus) may get transmitted from one person to the other.

12. When do we say that the work done is negative ? Calculate the work required to be done to stop a car of 1500 kg moving at a velocity of 60 km/h.

13. Write down three differences between a longitudinal and transverse wave.

14. (a) Define immunisation.

    (b) Suggest two diseases that can be prevented by vaccination.

    (c) Write one point of difference between acute and chronic diseases.

15. Differentiate between acute and chronic disease. Which one of them is more harmful and why?

16. Define power. A boy of mass 50 Kg runs up a staircase of 45 steps in 9 sec. If the height of each step is 15 cm. Find his power (g= 10 m/s²).

17. (a) Define 'Mole' and atomic mass unit.

    (b) What is the mass of 8 moles of Sodium Sulphate?

    (c) Calculate the molar mass of Nitric acid.

    (d) Convert 44 g of carbon dioxide into mole.

18. What are the major divisions in the Plantae? What is the basis for these divisions?

19. (i) State the method of transmission of each of the following diseases

    (a) Cholera   (b) Tuberculosis

    (ii) Discuss the causes, symptoms and preventive measures of AIDS.

20. (a) What is reverberation?

    (b) The frequency of a source of sound is 100 Hz. How many times does it vibrate in a minute?

    (c) A ship sends out ultrasound that returns from the sea bed and is detected after 3.42 sec. If the speed of ultrasound through sea water is 1531 m/s. What is the distance of the sea bed from the ship?

21. (a) An object of mass m is moving with velocity v along straight line. Derive an expression for kinetic energy of the object.

    (b) Find the energy in kwh consume in 10 hours by four devices of power 500 W each.

SECTION-C

25. When 10 g calcium carbonate is heated, 4.4 g of carbon dioxide escapes out. The amount of residue left is –

    (A) 5.6 g   (B) 9.8 g   (C) 10 g   (D) 14.4 g

26. When a solid object is fully immersed in a liquid, the volume of the liquid is displaced is

    (A) greater than the volume of the solid object.

    (B) less than the volume of the solid object.

    (C) equal to the volume of the solid object.

    (D) depends upon the manner in which the solid object is immersed in the liquid.

27. A student is given the following apparatus which are available in the laboratory

    (a) A thermocol sheet   (d) A pointed and intense source of sound

    (b) Two hollow glass tubes   (e) A polished metal sheet

    (c) A broad source of sound   (f) A detector of sound

    The student verified the laws of reflection of sound correctly by the using the apparatus labeled as

    (A) a,b,c,d   (B) a,b,d,f   (C) b,d,e,f   (D) a,b,c

29. In the experimental set up meant for verifying the laws of reflection of sound if we place a porous surface at the back of the two hollow tubes, then

    (A) Sound is lesser intensity will be heard.

    (B) Sound of greater intensity will be heard.

    (C) No sound will be heard.

    (D) Intensity of sound will not be affected.

30. The weight of an object noted in tap water and salted water are W_A and W_B respectively, then

    (A) $W_A = W_B$ (B) $W_A > W_B$ (C) $W_A < W_B$ (D) $W_A = 2W_B$

31. A glass trough has dimension 10cm × 10cm × 10cm. It rests with its perfect face (10cm × 10cm) in contact with the table top. If it is lifted and allowed to rest on the other surface, the pressure exerted will

    (A) Increase   (B) decrease   (C) Remain unchanged

    (D) may increase or decrease depending on the shape of the table

32. A pulse was created in a string/slinky of length 4m by a group of 4 students. They observed that it returned after reflection at the point of creation 6 times in 10 sec and calculated the speed as follows student:

Student	P	Q	R	S
Speed in m/s	0.4	2.4	4.8	9.6

The correct speed was calculated by the student (A) P   (B)Q   (C)R   (D)S   Ans: R

33. Which Structure helps the pupae of mosquito to swim in water?

(A) Feathers   (B) Fins   (C)Paddles   (D)Tracheal gills

34. Four students observed the given specimen carefully and recorded its one adaptive feature and phylum as given as below. What is the correct identification of the adaptive feature and phylum of the given animal ?

35. When 15g of copper sulphate react with 15g of sodium hydroxide, 20g of sodium sulphate along with copper hydroxide is formed. What is the mass of copper hydroxide ?

36. While determining the density of a solid a student noted down the following readings :   (i)   Mass of the sphere = 81g

    (ii)   Reading of water level in the cylinder without sphere in it = 71 ml

    (iii)   Reading of water level in the cylinder with sphere in it = 80 ml

    On the basis of these observations, what should be the density of solid ?

OBTA

22. Mention any four important inland water resources in India along with area covered.

23. How the project carried out in Tikamgargh district of Madhya Pradesh to contribute and conserved water and water bodies ?

24. Why do we need conservation of water bodies ? Discuss the role of government to run important schemes in order to conserve water and water bodies.