SUMMATIVE ASSESSMENT –II

SCIENCE

Class – IX

Time allowed: 3 hours | Maximum Marks: 90

General Instructions:

a) All questions are compulsory.
b) The question paper comprises of two sections, A and B. You are to attempt both the sections.
c) Questions 1 to 3 in section A are one mark questions. These are to be answered in one word or in one sentence.
d) Questions 4 to 7 in section A are two marks questions. These are to be answered in about 30 words each.
e) Questions 8 to 19 in section A are three marks questions. These are to be answered in about 50 words each.
f) Questions 20 to 24 in section A are five marks questions. These are to be answered in about 70 words each.
g) Questions 25 to 42 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

Section A

1. How many atoms are present in one molecule of ozone?
2. Name two animals belonging to reptilian class.
3. Give the SI unit of relative density.
4. Define valency of an element. Find the valency of chlorine and magnesium. (At. No. of Cl=17, Mg=12)
5. What is notochord? Mention its function.
6. A bag of cotton weighs 20 kg and occupies a volume of $5m^3$. Find its density. Express this density in CGS units.
7. a. Define the term "molecular mass".

   b. Calculate the mass of 0.5 mole of sugar ($C_{12}H_{22}O_{11}$) (Atomic mass of Fe=56u, C=12u, H=1u, O=16u).
8. a. Mention the postulates of Dalton's atomic theory that explains the law of constant proportions.

   b. Write the formulae and names of compounds formed by combination of:-

   i) Fe^{3+} and SO_4^{2-}

ii) NH_4^+ and CO_3^{2-}

9. Define disease and explain briefly two groups of causes of diseases.
10. Name the largest group of animals. Write the salient features of this group. Give two examples.
11. List in the tabular form any three differences between Aves and Mammalian group.
12. How are Phanerogamae divided into subdivisions?
13. a. Why the stage of an auditorium has curved background curtains, carpets and false ceiling?

    b. The sound of a ringing bell inside a vaccum chamber cannot be heard? Why?
14. Swati went to doctor as she was having severe pain in lower abdomen and back. The doctor suggested her to to go for an ultrasound. A stone was detected in the kidneys. She underwent treatment and was relieved of pain. Later, she thanked the doctor and praised technology for helping her.

    a. Name the technique suggested by doctor.

    b. Is swati well awared of health issues?

    c. What is ultrasound?

    d. Is important to consult doctor when you face any health issue?
15. a. Define frequency of a sound wave and give its SI unit.

    b. Explain how ultrasound is used to clean spiral tubes and electronic components?
16. Explain how human ear works in the transmission of sound wave to the brain.
17. a. State a condition for an echo to be heard.

    b. Describe two uses of multiple reflections of sound.
18. Find the change in momentum of a body when its kinetic energy becomes four times the original value.
19. Compute the number of ions present in 5.85 g of sodium chloride.
20. Give the comparative summary of the vertebrate classes.
21. a. Moths of certain families are able to escape capture when a bat is flying nearby. Explain how?

    b. How do the sound waves cause vibrations in the eardrum of human ear?
22. Find the energy in kWh consumed in 25 hours by two electric devices, one of 100W and other of 500W.

Section B

23. In the reaction between copper sulphate and sodium sulphide solutions, when 15.9 g copper sulphate completely reacts with 7.8 g of sodium sulphide it is observed that 9.5 g of copper sulphide is formed. What is mass of sodium sulphate solution formed?

24. What is moulting in the life cycle of mosquito?

25. If the relative density of a body is 6.2, what will be its density in SI unit?

26. What is the colour of copper sulphate solution?

    a. blue b. black

    c. red d. green

27. What is the colour of copper sulphide ?

    a. white b. red

    c. colourless d. black

28. One character common between mosses and ferns is

    a. monoecious gametophyte b. dioecious gametophyte

    c. dominant gametophytic phase d. dominant sporophytic phase

29. Individual member of perianth is called as

    a. sepal b. petal

    c. bract d. tepal

30. Which of the following type of fishes are covered by operculum :-

    a. bony fishes b. cartilaginous fishes

    c. both of these d. none of these

31. The female mosquitoes are attracted to human beings and other animals by

    a. hydrogen b. oxygen

    c. carbon dioxide d. nitrogen

32. If in the experiment to verify laws of reflection of sound, the back surface is replaced by rough surface then

    a. no reflection of sound takes place

b. reflected sound will have same loudness

c. sound will be heard with lesser intensity than the incident sound

d. sound will be heard with greater intensity

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33. A brick has six different faces. The brick is placed on a table with all the faces one after the other on the tabletop. The thrust exerted by the brick on the tabletop is a. the same in all cases

b. different in all cases

c. equal in two cases but different from other cases

d. not possible to say anything without calculations

34. When a body is fully or partly immersed in a liquid it undergoes an apparent loss in its weight due to

a. decrease in its mass

b. decrease in its volume

c. upward thrust exerted by the liquid

d. decrease in the density of the body