CBSE Sample Paper - 05
SUMMATIVE ASSESSMENT –II
Class – IX SCIENCE

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 6 in section A are two marks questions. These are to be answered in about 30 words each.
e) Questions 7 to 18 in section A are three marks questions. These are to be answered in about 50 words each.
f) Questions 19 to 24 in section A are five marks questions. These are to be answered in about 70 words each.
g) Questions 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.
h) Questions 34 to 36 in section B are based on practical skills. Each question is a two marks question.

Section A

1. Give an example of a tri-atomic molecule of an element.
2. Valency of an element X is 3. Write the chemical formula of its oxide.
3. What is negative work.
4. Why do we keep both snake and turtle in the same class?
5. Why is sound wave called a longitudinal wave?
6. How does the temperature of Earth's atmosphere remain fairly uniform during the day?
7. A sound wave has a frequency 2 kHz and wavelength 40 cm. How long will it take to travel 1.6 km?
8. Define potential energy? What are different types of potential energy?
9. What are wavelength, frequency, time period of a sound wave?
10. Compare the properties of electrons, protons and neutrons.
11. List any three distinguishing features between the models of an atom proposed by J.J. Thomson and Ernest Rutherford.
12. Write characteristics of kingdom Animalia.
13. Give an example where tissue specificity of the infection leads to very general seeming effects.
14. Derive an expression for the potential energy of the body. Calculate P.E of body of mass 10Kg at a height of 10m.
15. Sound waves of wavelength λ travel from a medium in which its velocity is v m/s into another medium in which if velocity is 3 v m/s. What is the wavelength of the sound λ in the second medium?
16. Prove the formula KE $= \frac{1}{2}mv^2$.

17. In a school assembly, the students were asked to wear full sleeves shirts, full pants and socks pulled till knees, use mosquitoes repellants cream during day time.

    (i) Name the disease, about which preventive instruction are given in the assembly.

    (ii) Name the vector of this disease.

    (iii) Give two preventive environmental measures.

    (iv) Which two values were given in assembly related to society?

18. Why does Mathura refinery pose problem to Taj Mahal?

19. What precautions will you take to justify "prevention is better than cure".

20. (i) State two basis of classifying plants and animals into different categories.

    (ii) List three characteristics features of fungi.

    (iii) Some fungal species live in permanent, mutually dependent relationships with cyanobacteria.

    What is this relationship called? Where are they found?

21. What do you mean by work? Give an example of negative work done? What is the work to be done to increase the velocity from 18km/hr to 19km/hr, if the mass of the car is 2000 Kg.

22. (a) Why is the ceiling and wall behind the stage of good conference halls or concert halls made curved?

    (b) Which property of sounds leads to the formation of echoes? Briefly explain.

    (c) What is reverberation? What will happen if the reverberation time in a big hall is too long? How can we reduce it?

23. A person standing between two vertical cliffs and 640 m away from the nearest cliff shouted. He heard the first echo after 4 seconds and the second echo 3 seconds later. Calculate

    (i) the velocity of sound in air, and

    (ii) the distance between the cliffs.

24. "Soil is formed by water." If you agree to this statement then give reasons for your answer.

Section B

25. β –particles are represented as:

    (a) $_{-1}^{0}e$ (b) $_{+1}^{0}e$

    (c) $_{-1}^{1}e$ (d) $_{0}^{1}e$

26. Atomic Number of an element is equal to:

    (a) Number of Protons   (b) Number of electrons

    (c) Number of neutrons   (d) Both (a) and (b)

27. Which one of the following is not the exclusive trait of Arthropoda?

    (a) presence of wings   (b) jointed appendages

    (c) chitinous exoskeleton   (d) presence of haemocoel

28. The chemical that kill or stop the growing of certain kinds of microbes are called:

    (a) vaccines   (b) microbes

    (c) antibiotics   (d) fungi

29. What is the work done in lifting a body of mass 5Kg vertically through 9m?

    (a) 450J   (b) -450J

    (c) 45J   (d) 540J

30. Nitrogen is:

    (a) Monatomic   (b) Diatomic

    (c) Triatomic   (d) Tetratomic

31. $^{40}_{18}Ar$ and $^{40}_{20}Ca$ are

    (a) Isotopes   (b) Isobars

    (c) Isotones   (d) Both b and c

32. Which isotope of hydrogen is present in heavy water?

    (a) $(^{3}_{1}H)$ (b) $(^{2}_{1}H)$

    (c) $(^{3}_{2}H)$ (d) $(^{1}_{2}H)$

33. Which of the following is not a criterion for classification of living organisms?

    (a) Body design of the organism

    (b) Ability to produce one's own food

    (c) Membrane bound nucleus & cell organelles

    (d) Height to the plant

34. A baby is not able to tell her/his caretakers that she/he is sick. What would help us to find out that the baby is sick?

35. A freely falling object eventually stops on reaching the ground. What happens to its kinetic energy?

36. A sound wave travels at a speed of 340m/s. If the wavelength of wave is 1.4m, what is the frequency of wave?