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**CBSE Sample Paper -05 (unsolved)**  
**SUMMATIVE ASSESSMENT -II**  
SCIENCE (Theory)  
Class – IX

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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
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**Section A**

1. What are canal rays?
  2. Which group of organisms has segmented worms?
  3. Explain the basis for grouping organisms into five kingdoms.
  4. Write one pair of Isobars. Why the chemical properties of isobars are not similar?
  5. State the differences between acute and chronic diseases.
  6. Why does a nail sink in water but a piece of cork floats on it?
  7. What are isotopes? Write 3 isotopes of hydrogen. Why do isotopes show similar chemical properties?
  8. An atom of an element has 7 electrons in its L shell.
    - a. What is its atomic number?
    - b. State its valency.
    - c. Identify the element.
  9. Why is a particular medicine effective against disease caused by a particular group of organisms and not the others?
  10. What are vectors? Name the vectors of malaria and kalaazar.
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11. Why do we keep snake and turtle in the same class?
  12. Differentiate between Bryophyta and Pteridophyta. Give one example of each.
  13. Suppose the mass of the earth somehow increases by 10% without any change in its size. What would happen to your weight? Suppose the radius of the earth becomes twice its present radius without any change in its mass. What will happen to your weight?
  14. A sound wave has frequency of 2 kHz and a wavelength of 45 cm. It takes 4s to travel. Calculate the distance it travels.
  15. What does SONAR stand for? Name its two main parts. List two uses of SONAR technique.
  16. Two boys Atul & Amit make a toy telephone by joining two plastic cups through a long string. They both stand apart. Atul speaks softly into one cup and Amit hears by putting his ears in the other cup. Then Amit speaks and Atul listens.
    - (a) What type of waves are produced in the string?
    - (b) Give one point of difference between these types of waves.
    - (c) What type of waves are produced by Atul & Amit by speaking, in the air inside plastic cups?
    - (d) Throw light on qualities of both the friends.
  17. Find the distance between a surface and the source of sound, if speed of sound is 334m/s and echo returns from surface in 1.5 s.
  18. How does the sound produced by a vibrating object in a medium reach your ear?
  19. a. The average atomic mass of a sample of an element X is 16.2u. What are the percentages of isotopes  $^{16}\text{X}$  and  $^{18}\text{X}$  in the sample.  
b. On the basis of Thomson's model of an atom explain how the atom is neutral as a whole.
  20. Write the characteristic features of kingdom Protista.
  21. a. Draw a diagram depicting soft sound and a loud sound. What is the main difference between the two?  
b. Why are ceilings of concert halls and conference halls made curved? Explain by giving a diagram.  
c. Can two astronauts talk on the surface of the moon as they do on the surface of the earth? Why?
  22. a. State the principle of conservation of energy. What are various energy transformations that occur when you are riding a bicycle?  
b. A body of mass 25 g has a momentum of 0.04 kg m/s. Find its kinetic energy.
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23. OTBA
24. OTBA

## **Section B**

25. In a chemical reaction 5.3 g of sodium carbonate reacted with 6 g of acetic acid then it was observed that 8.2 g of sodium acetate, 0.9 g of water and x g of carbon dioxide were produced. What is the value of x?
26. Correct the following sequence as the body parts of earthworm  
Anus-clitellium-peristomium-genital papillae
27. A body weighs 12 kg wt on earth. What will be its weight on the moon ?
28. Distance between two successive compressions in a wave is 250 m/s, then its frequency is
  - a. 0.07 kHz
  - b. 0.7 kHz
  - c. 70 kHz
  - d. 7 kHz
29. Lead nitrate solution for the verification of law of conservation of mass should be prepared in
  - a. distilled water as it does not contain  $\text{Cl}^-$  ion which reacts with  $\text{Pb}^{2+}$  ions to form  $\text{PbCl}_2$
  - b. tap water as it contains  $\text{Cl}^-$  ion
  - c. distilled water as it contains  $\text{NO}_3^-$  ions
  - d. tap water as it contains  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$  and  $\text{Cl}^-$  ions.
30. Cones which are born in cluster in Pinus are
  - a. male cones
  - b. female cones
  - c. both of these
  - d. none of these
31. Pupa of mosquito is called
  - a. tumbler
  - b. wriggler
  - c. imago
  - d. trumpet
32. The branch of biology that deals with the study of fungi is called
  - a. Algology
  - b. Phycology
  - c. Mycology
  - d. Microbiology
33. Agaricus is
  - a. autotrophic
  - b. parasitic
  - c. saprophytic
  - d. symbiotic
34. Which one is the correct statement?
  - a. mass is a vector quantity
  - b. mass is a scalar quantity
  - c. mass= force x acceleration
  - d. mass= weight x acceleration due to gravity
35. One kg wt equals:
  - a. 4.9 N
  - b. 9.8 N
  - c. 49 N
  - d. 980 N
36. The astronauts on the moon can see each other but cannot hear each other's voice, because
  - a. moon is far off from earth
  - b. temperature variation is large
  - c. there is no light
  - d. there is no atmosphere