

## Appendices

### Annexure I - Achievement Scores of Students of Control (Traditional method of teaching) Group

List of Students	Pre-Test Scores	Post-Test Scores
Student 1	15	35
Student 2	09	29
Student 3	14	31
Student 4	11	21
Student 5	10	30
Student 6	08	31
Student 7	21	37
Student 8	12	18
Student 9	13	32
Student 10	28	39
Student 11	11	33
Student 12	17	28
Student 13	12	30
Student 14	24	36
Student 15	22	39
Student 16	07	22
Student 17	17	34
Student 18	14	30
Student 19	09	32
Student 20	15	29

**Annexure II - Achievement Scores of Students of Experimental (Art-Integrated Learning) Group**

<b>List of Students</b>	<b>Pre-Test Scores</b>	<b>Post-Test Scores</b>
<b>Student 1</b>	09	35
<b>Student 2</b>	12	38
<b>Student 3</b>	14	36
<b>Student 4</b>	17	39
<b>Student 5</b>	07	34
<b>Student 6</b>	19	38
<b>Student 7</b>	17	36
<b>Student 8</b>	05	39
<b>Student 9</b>	21	40
<b>Student 10</b>	18	39
<b>Student 11</b>	11	37
<b>Student 12</b>	13	40
<b>Student 13</b>	09	36
<b>Student 14</b>	15	39
<b>Student 15</b>	25	40
<b>Student 16</b>	16	34
<b>Student 17</b>	05	38
<b>Student 18</b>	18	36
<b>Student 19</b>	08	39
<b>Student 20</b>	24	35

## Annexure III – Self-made Achievement Test

(Self-made Questionnaire for Achievement test of Class 8 Science.)

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### SCIENCE – ACHIEVEMENT TEST

**Class: VIII**

**Max marks: 40**

**Subject: Science**

**Duration: 1hour**

**NOTE: This paper is divided into two sections A and B. Section A comprises Multiple Choice Questions and Section B comprises of One Word Answers. All questions are compulsory. Each question carries 1 mark.**

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### SECTION – A

(Multiple Choice Questions)

**Choose the correct answer among the following:**

**(30 marks)**

- Which one of the following acts as a medium for propagation of sound?
  - Solid
  - Gas
  - Liquid
  - All of these
- The range of audible sound for a human being is:
  - 20 Hz to 20,000 Hz
  - 20 Hz to 10,000 Hz
  - 10 Hz to 10,000 Hz
  - 20 Hz to 40,000 Hz
- Which one of the following is unicellular organism?
  - Amoeba and Paramecium
  - Human
  - Mouse
  - Fish

4. Sound is a kind of:
- a. Work
  - b. Energy
  - c. Force
  - d. None
5. The green colour of leaves is due to the presence of the pigment \_\_\_\_\_.
- a. chlorophyll
  - b. ribosomes
  - c. mitochondria
  - d. chloroplast
6. All the multicellular organisms start their life as a \_\_\_\_\_.
- a. single cell
  - b. double cell
  - c. triple cell
  - d. without a cell
7. The frequency of subsonic sound is:
- a. more than 20 Hz
  - b. 100 Hz
  - c. less than 20 Hz
  - d. more than 20,000 Hz
8. Which organelle is called the "powerhouse of the cell"?
- a. Nucleus
  - b. Endoplasmic Reticulum
  - c. Mitochondrion
  - d. Golgi Apparatus
9. Speed is:
- a. Distance travelled / Time
  - b. Time / Distance travelled
  - c. Distance travelled \* Time
  - d. Time + Distance travelled
10. 1 Hertz is equal to
- a. 1 vibration per minute
  - b. 10 vibrations per minute
  - c. 60 vibrations per minute
  - d. 600 vibrations per minute
11. Which among the following organelles synthesizes lipids?
- a. Smooth Endoplasmic Reticulum
  - b. Rough Endoplasmic Reticulum
  - c. Golgi Apparatus
  - d. Lysosome

12. Which of the following statements is incorrect about Endoplasmic Reticulum?
- a. It is involved in lipid synthesis.
  - b. It is involved in ribosome synthesis.
  - c. It is post office of the cell.
  - d. Involved in detoxifying chemicals.
13. Shrillness of a sound is determined by \_\_\_\_\_ of vibration.
- a. amplitude
  - b. frequency
  - c. time-period
  - d. speed
14. Which one of the following instruments produces sound through vibrations?
- a. Ghatam
  - b. Tabla
  - c. Flute
  - d. Sitar
15. Which among the following is not the function of lysosomes?
- a. Breaking down of food particles.
  - b. Protection against the pathogens.
  - c. Perform photosynthesis.
  - d. Digest worn-out cells.
16. The fluid present between the cell membrane and the nucleus is called \_\_\_\_\_.
- a. Cytoplasm
  - b. Nucleoplasm
  - c. Protoplasm
  - d. Serum
17. Voice of which of the following is likely to have minimum frequency?
- a. Baby girl
  - b. Baby boy
  - c. A man
  - d. A woman

18. Choose the correct statement(s):

- i. Ribosomes are located on the chromosomes.
- ii. Cell is located in the nucleus.
- iii. Chloroplasts are located in the nucleolus.
- iv. Cell membrane surrounds the cell.

- a. (i), (ii) and (iii)
- b. (i) and (ii)
- c. (iii) and (iv)
- d. Only (iv)

19. The sound in the audible range is called \_\_\_\_\_.

- a. ultrasonic sound
- b. sonic sound
- c. subsonic sound
- d. light sound

20. I am a double-membered cell organelle. I produce energy-rich molecules called ATP. I have my own genetic material, who am I?

- a. Cell membrane
- b. Plastid
- c. Nucleus
- d. Mitochondrion

21. Vibration is also known as \_\_\_\_\_.

- a. vibratory motion
- b. translatory motion
- c. oscillatory motion
- d. None of these

22. Which of the following is the non-living part of the cell?

- a. Cell membrane
- b. Cytoplasm
- c. Mitochondrion
- d. Cell wall

23. The maximum displacement of a body from its mean position is called \_\_\_\_\_.

- a. amplitude
- b. oscillation
- c. periodic motion
- d. frequency

24. What are pseudopodia?

- a. Vacuole of amoeba
- b. False feet of amoeba
- c. Heart of amoeba
- d. Eye of amoeba

25. One of the most common well-known periodic motion is that of:

- a. Quartz Clock
- b. Sun Dial
- c. Simple pendulum
- d. Digital clock

26. If your father has brown eyes, you may also have brown eyes. If your mother has curly hair, you might also end up having curly hair. This transfer of characteristics is due to the transfer of \_\_\_\_\_.

- a. Mitochondria
- b. Lysosomes
- c. Chloroplasts
- d. Chromosomes

27. Sound lost more energy in:

- a. Air
- b. Vacuum
- c. Liquid
- d. Solid

28. In an animal cell, which among the following organelles has its own DNA?

- a. Chloroplast
- b. Chromoplast
- c. Leucoplast
- d. Mitochondria

29. When a tightly stretched band is plucked it:

- a. Only oscillate to and fro
- b. Produce sound but do not vibrate
- c. Vibrate but do not produce sound
- d. Vibrate and produce sound

30. Which organelle is called the "suicide bags" of the cell?

- a. Golgi apparatus
- b. Plastids
- c. Lysosomes
- d. Mitochondria

**SECTION – B**  
**(One Word Answers)**

**I. Fill in the blanks.**

**(5 marks)**

1. To and fro motion of an object is called \_\_\_\_\_.
2. Amoeba uses \_\_\_\_\_ for locomotion.
3. Sound cannot travel through a \_\_\_\_\_.
4. The technique in which cellular components are coloured for better observation is called \_\_\_\_\_.
5. The loudness of sound depends upon \_\_\_\_\_.

**II. Write True or False against the following statements: -**

**(5 marks)**

1. Protoplasm includes nucleoplasm and cytoplasm.
2. If the amplitude of vibration is large, sound is feeble.
3. Cell wall is non-living and composed of cellulose.
4. The lower the frequency of vibration, the higher is the pitch.
5. Animal cells have a cell wall, but plant cells do not.