3rd Term Worksheet [2018 – 19]

Subject – Physics

Class – VIII

Name : **Sec. :**

Chapter – 7
[Sound]

Check Point:

[A] Answer the following questions: [99]

1. What do you mean by frequency?

Ans. _____

2. How frequency is different from speed of sound wave?

Ans. _____

3. What do you mean by pitch?

Ans. _____

4. Is there any relationship between pitch and frequency? Explain.

Ans. _____

[B] Answer the following questions: [100]

1. Name the musical instrument that produces sound through strings, membrane and wind?

Ans. _____

2. How do the frequencies of stringed instrument vary?

Ans. _____

3. How is a stringed instrument able to produce sound?

Ans. _____

4. On what does the pitch of the drum depend?

Ans. _____

5. How is a drum able to produce sound?

Ans. _____

6. How can we change the frequency of sound produced in wind instruments?

Ans. _____

7. Define monotone with examples.

Ans. _____

[C] Answer the following questions: [102]

1. Which unit is used to measure sound?

Ans. _____

2. On which factors does loudness depends?

Ans. _____

3. What do you mean by quality of sound? Why is it different for different instruments?

Ans. _____

Keywords: **[104]**

Sound: _____

Frequency: _____

Pitch: _____

Stringed instrument: _____

Membrane instrument: _____

Wind instrument: _____

Monotone: _____

Loudness: _____

Amplitude: _____

Exercise: **[105-107]**

[A] Multiple Choice Questions: [105]

(i) The loudness of sound is measured in _____.

(a) newton (b) decibel

(c) metre (d) watt

(ii) _____ instruments have stretch strings.

(a) Membrane (b) Wind

(c) Strings (d) None of the above

(iii) The sensation of a _____ is usually known as a pitch of a sound.

(a) tone (b) volume

(c) frequency (d) all of the above

(iv) _____ of the following is not the kind of musical instrument.

(a) Stringed instrument (b) Weighing instrument

(c) Membrane (d) Wind instrument

(v) If the string is tight, pitch frequency will be _____.

(a) low (b) high

(c) no change (d) can't say

(vi) Monotone refers to _____.

(a) single tone (b) no rise or fall of pitch

(c) tone does not vary (d) all of the above

(vii) If the surface area of a membrane is large then the pitch is _____.

(a) low (b) high

(c) no change (d) can't say

(viii) Membranes are generally made of _____.

(a) rubber (b) leather

(c) cotton (d) plastic

(ix) _____ is not an example of stretched skin (membrane).

(a) drum (b) tabla

(b) trumpet (d) mridamgam

(x) _____ is an example of air column.

(a) guitar (b) flute

(c) sitar (d) tabla

[B] Fill in the blanks: [106]

1. Sound is a type of energy induced by _____.
2. _____ travels in waves.
3. The number of vibrations made by the vibrating body in one second is called _____.
4. _____ is indicated by the height of the crest and the depth of the trough of the sound wave.
5. _____ denotes the shrillness or flatness of a sound.
6. Stringed instruments contain a _____ that vibrates at the same frequency when stretched and intensity of the sound increases.
7. The _____ shows how fast the waves pass through a certain point.
8. The _____ of the string depends on how loose or tight the string is.
9. _____ at different places produce different musical notes with various pitches when they get vibrated.

10. _____ instruments are made of long and hollow pipes with a number of holes drilled.

[C] State whether the following statements are True or False: [106]

1. Loudness is proportional to the cube of the amplitude. _____
2. The more the area of the vibrating body, the louder is the sound. _____
3. A note is not produced by a combination of frequencies. _____
4. The quality of note does not depend on the nature and number of overtones. _____
5. The pitch of the voices of women and children is lower than that of men. _____
6. A big drum produces a louder sound than a small drum. _____
7. The loudness level of whispering is 30 dB – 40 dB. _____
8. If the loudness is less than 80 dB then it is known as sound pollution. _____
9. The loudness of a wave is highly dependent on energy. _____
10. One cannot produce a pitch of different frequency from the same string. _____

[D] Match the items in column I with the correct choices in column II: [106-107]

	Column I		**Column II**
1.	SI unit of frequency	a.	Shehnai
2.	Stringed instruments	b.	fundamentals
3.	Membranes	c.	Hertz
4.	Wind instruments	d.	musical instruments
5.	Monotone	e.	Mridamgam
6.	Larger amplitude	f.	Things that produce monotone
7.	Harmonics	g.	Pitch does not vary
8.	The loudest and the lowest notes	h.	overtones
9.	Cluster	i.	Guitar
10.	Instruments which produce different musical notes	j.	louder sound

[E] Answer the following questions: [107]

1. Differentiate between frequency and speed of sound wave.

Ans- _____

2. Explain the relationship between pitch and frequency with the help of metallic ruler.

Ans- _____

3. Short note on musical instruments.

Ans-

4. Short note on loudness.

Ans-

5. Explain how loudness of sound is dependent on the amplitude of the vibration from an object.

Ans-

Chapter – 8
[Electricity]

Check Point:

[A] Answer the following questions: [110]

1. Give example of appliances used daily which consume electricity.

Ans. _____

2. Explain live wire, neutral wire and earth wire with their function.

Ans. _____

[B] Answer the following questions: [117]

1. Combing dry hair has charged one of the two identical combs. Explain how will you find which one of them charged.

Ans. _____

2. Name two types of electric charges.

Ans. _____

3. Name the kind of charge acquired by a glass rod when rubbed with a silk piece.

Ans. _____

4. A positively charged body attracts another charged body kept close to it. what is the nature of charge on the other body?

Ans.

5. What is the law of electrostatic attraction and repulsion in electrostatic?

Ans.

6. How the flow of electrons in a conductor and direction of conventional current are related?

Ans.

[C] Answer the following questions: [123]

1. Name two methods by which a body can be charged.

Ans.

2. Explain how will you charge a plastic comb by the method of friction?

Ans.

3. A glass rod is rubbed with silk cloth and then brought in contact with a metallic pin suspended with the cotton thread. Will the pin get charged? If so, what be the nature of charge on it?

Ans. _____

4. Why is it difficult to charge a metallic rod with the method of friction?

Ans. _____

5. Name the device used for detecting presence of charge on a body.

Ans. _____

[D] Answer the following questions: [127]

1. How does an electric shock affect a person?

Ans. _____

2. How does a battery work in a mobile phone?

Ans. _____

Keywords: **[81]**

Electricity: _____

_____

Electric current: _____

_____

Circuit breakers: _____

_____

Static electricity: _____

_____

Conduction: _____

_____

Induction: _____

_____

_____

Electroscope: _____

_____

Exercise: **[129-132]**

[A] Multiple Choice Questions: [129-130]

(i) When an ebonite rod is rubbed with a piece of flannel cloth, the rod.

(a) and the cloth both acquire positive charge

(b) becomes positively charges while the cloth has negative charge

(c) and the cloth, both acquire negative charge

(d) becomes negatively charged while the cloth has a positive charge

(ii) Which of the following cannot be charged easily by friction?

(a) a glass rod (b) a copper rod

(c) a ball of wool (d) an inflated balloon

(iii) An electroscope has been charged by induction with the help of a charged glass rod. The charge on the electroscope will be

(a) negative (b) positive

(c) both negative and positive (d) none of these

(iv) When glass rod is rubbed with a silk piece, the charge acquired on the glass rod is

(a) negative (b) positive

(c) neutral (d) none of these

(v) When same charged bodies are brought nearer, these will show

(a) attraction (b) repulsion

(c) no effect (d) none of these

(vi) The good conductor of electricity is

(a) hydrogen (b) oxygen

(c) silver (d) plastic

(vii) Charges always occur

(a) together (b) separately

(c) freely (d) none of these

(viii) The flow of electrons (electric charge) is known as

(a) electric current (b) electric potential

(c) electric field (d) none of these

(ix) The insulator from the following is:

(a) mercury (b) glass

(b) copper (d) silver

(x) The device or arrangement to save high buildings from lighting is:

(a) electroscope (b) lightning conductor

(c) telescope (d) none of these

[B] Fill in the blanks: [130]

1. _____ charge is constant and it cannot be crated or destroyed.
2. Static electricity is caused by _____.
3. Lightning during the thunderstorm is caused by _____.
4. _____ is produced by rubbing objects together.
5. The law of conservation of charges is obeyed during charging by _____.
6. _____ is dangerous and can result in loss of life too.
7. We use _____ in different devices such as mobile, car and music systems.
8. We can safeguard tall buildings from lightning by using _____.
9. _____ are made of conductive materials.
10. A _____ has a thing metallic filament that melts and breaks the connection, when the circuit is overheated.

[C] State whether the following statements are True or False: [130-131]

1. When there is a balance in number of protons and electrons in an object, electric charge is created. _____
2. Mini circuit breakers (MCBs) are not preferred in household wiring. _____
3. If an object contains more number of protons than electron then the objet is said to be positively charged. _____
4. The electrical current discharges from anode and enters from cathode at the time of discharge. _____
5. An electroscope is charged through induction by an object that is negatively charged. _____
6. The movement of leaves or needle indicates the positivity or negativity. _____
7. The direction of flow of the electrons is opposite to that of the flow of current. _____
8. Electricity is a form of energy. _____
9. The usage is electricity has decreased because of urbanization. _____
10. The fuses usually used in a circuit are cartridge shaped fuses, which cannot be replaced one the wire in it melts. _____
11. Like charges attract while unlike charges repel each other. _____
12. In the process of charging only negatively charges particles (or element) get transferred from one body to another. _____
13. A charged body induces an opposite charge on an uncharged body brought near it. _____
14. Electroscope is a device used to charge a body by induction. _____
15. Materials that allow electric charge to pass through them are friction. _____
16. Electric charges are created when a body is charged by friction. _____
17. The charge acquired by an ebonite rod rubbed with a piece of flannel is negative. _____

18. The atoms of a substance consist of particles that have either positive or negative charge on them. _____

19. Repulsion between two bodies is a sure test that both of them are charges. _____

20. A lightning conductor consists of two metallic strips, one of which is fixed at the top of the building while, other at the bottom, to protect the building from against lightning. _____

[D] Match the items in column I with the correct choices in column II: [131]

	Column I		**Column II**
1.	Like charges	a.	acquires a positive charge
2.	Unlike charges	b.	insulator
3.	An ebonite rod rubbed With flannel cloth piece	c.	to detect the present of charge
4.	A glass rod with silk piece	d.	conductor
5.	Silver	e.	acquires a negative charge
6.	Plastic	f.	an arrangement to protect buildings and human life
7.	Lightning conductor	g.	attract each other
8.	An electroscope	h.	repel each other

[E] Answer the following questions: [131-132]

1. What is the function of live wire, neutral wire and earth wire?

Ans- _____

2. Write a note on safety components.

Ans- _____

3. Write a note on static electricity with a practical example.

Ans-

4. Conservation of electricity.

Ans-

5. Explain conduction.

Ans-

6. Explain induction.

Ans-

7. Detection of electric charge with the help of electroscope.

Ans-

8. How does the car battery work?

Ans-

[F] Give reasons for the following: [132]

1. When a glass rod is rubbed with silk cloth, both are charged.

2. A comb rubbed with dry hair attracts small bits of paper.

3. If an uncharged body is touched to the disc of a charged electroscope, the leaves of an electroscope collapse.

4. A lightning conductor is fixed at tall buildings.

5. When a charged body is brought close to an uncharged body, the unlike charge is induced to nearer end of an uncharged body.

[G] Find the odd-one out. Give reasons for your choice: [132]

1. plastic, rubber, wood, glass, aluminium

2. electron, proton, atom, negatively charged particle

3. mercury, graphite, oxygen, human body, steel

4. glass rod, ebonite rod, flannel cloth, silk cloth, aluminium rod

5. gold leaf electroscope, pithball electroscope, imorovised electroscope, lightning conductor

[H] Differentiate between the following: [132]

1. Conductors and insulator:

2. Conduction and induction process of charging