

# SWO International Science Olympiad 2021-22

## Class 9th

**Questions: 20**

**Time Duration: 30 Minutes**

There are 4 Sections- 5 Questions in Section-1, 5 Questions in Section-2, 5 Questions in Section-3, 5 Questions in Section-4.

### Section - 1

**1. Write the formula of momentum - \_\_\_\_\_.**

Ans. mass x velocity

**\*2. The rate of change of momentum of an object is proportional to applied force in the direction of force.**

- (a) Newton's first law of motion.
- (b) Newton's second law of motion.
- (c) Newton's third law of motion.
- (d) None of these

Ans. (b)

**3. Net displacement/total time taken = \_\_\_\_\_.**

- (a) Average Speed.
- (b) Instant Speed.
- (c) Average Velocity.
- (d) Instant Velocity.

Ans. (c)

**4. \_\_\_\_\_ is the rate of change of velocity.**

Ans. Acceleration

**5. Relative density formula is -  
Density of water / Density of substances**

- (a) True.
- (b) False.

Ans. False

## Section - 2

**6. It is the energy produced by a substance as it vibrates. This energy flows through the substance in the form of sound waves.**

- (a) Chemical Energy.
- (b) Ionization Energy.
- (c) Nuclear Energy.
- (d) Sonic Energy

Ans. (d)

**7. Commercial unit of energy = \_\_\_\_\_.**

Ans. 1 kilowatt hour (kwh)

**8. When we hear the same sound again and again in a medium it is called \_\_\_\_\_.**

Ans. Echo

**9. It is located in the inner ear. It converts the vibrations into electrical signals which are then carried to the brain by the auditory nerve.**

- (a) Cochlea.
- (b) The Middle Ear.
- (c) Auditory Canal.
- (d) Pinna

Ans. (a)

**10. There is less kinetic energy among the particles in\_\_\_\_\_.**

- (a) Gases
- (b) Solid
- (c) Liquid

(d) None of these

Ans. (b)

### Section - 3

**11. Change of state of a gas directly into solid and vice-versa is known as sublimation.**

(a) True.

(b) False.

Ans. True

**12. An \_\_\_\_\_ is a mixture of different metals or non-metals and metals that cannot be separated from each other using physical methods.**

Ans. Alloy

**13. At room temperature, 2 elements exist in the liquid state – bromine and mercury.**

(a) True.

(b) False.

Ans. True

**14. When an element comprises of three atoms.**

(a) Monoatomic.

(b) Diatomic.

(c) Triatomic.

(d) Tetra-atomic.

Ans. (c)

**\*15. 1 mole of any substance = \_\_\_\_\_ number of particles.**

Ans.  $6.022 \times 10^{23}$

### Section - 4

**16. Electrons existing in the outermost orbit of an atom are called\_\_\_\_\_.**

Ans. Valence Electrons

**17. It is a process by which the plasma membrane engulfs food and other materials inside the cell.**

Ans. Endocytosis

**\*18. They move inside the body through its normal function unlike blood which is pumped by the heart.**

- (a) Cartilage .
- (b) Areolar.
- (c) Tendons.
- (d) Lymph.

Ans. (d)

**\*19. Fungi also called \_\_\_\_\_ because they grow over the organic material and survive on them.**

Ans. Saprophytes

**20. They are caused due to animals that carry infectious agents from a sick person to another person.**

- (a) Vector-borne Diseases.
- (b) Foodborne diseases.
- (c) Lifestyle diseases.
- (d) Sexually transmitted diseases.

Ans. (a)

