

Solutions and Explanations: Tallentex Class VI Sample Paper

SECTION A: PHYSICS

1. Correct Answer: (3) A moving car

Explanation: Kinetic energy is the energy an object has due to its motion. Among the given options, only a moving car possesses kinetic energy.

2. Correct Answer: (1) A-r, B-q, C-p

Explanation: 5 cm test tube matches 50 mm pin, 500 m distance is the same as 0.5 km bridge, and 5 m ribbon corresponds to 500 cm rope.

3. Correct Answer: (2) In a spaceship

Explanation: Objects float in a spaceship because there is no gravity, resulting in a condition called weightlessness.

4. Correct Answer: (3) It is heated

Explanation: A non-luminous object may become luminous if it is heated sufficiently to emit light.

5. Correct Answer: (4) Distance from the Sun

Explanation: Earth's optimal distance from the Sun allows it to maintain temperatures conducive to life.

6. Correct Answer: (3) Pull, Push

Explanation: Boy A exerts a pulling force, and Boy B exerts a pushing force.

7. Correct Answer: (2) Night at location X

Explanation: After 12 hours, the location that is experiencing day will experience night as the Earth rotates.

8. Correct Answer: (3) An inverted and small image

Explanation: A pinhole camera produces an inverted and smaller image compared to the object.

9. Correct Answer: (4) Kilometre

Explanation: Large distances such as the distance between two cities are measured in kilometres.

10. Correct Answer: (1) It decreases in size.

Explanation: Moving the torch away from the object reduces the size of the shadow.

11. Correct Answer: (4) Thread and meter scale

Explanation: To measure the circumference of a cylindrical object like a bottle, a thread can be wrapped around it and then measured with a meter scale.

SECTION B: CHEMISTRY

12. Correct Answer: (4) Because glass is a harder material than Q and S

Explanation: Harder materials can scratch softer ones. Since glass is harder than Q and S, it can scratch them.

13. Correct Answer: (4) Sawdust

Explanation: Sawdust is an insoluble substance in water, unlike oxygen, sugar, or salt.

14. Correct Answer: (2) Evaporation

Explanation: Evaporation is the process of converting water to vapor, leaving behind the salt.

15. Correct Answer: (2) 3

Explanation: Water primarily exists in three states: solid (ice), liquid (water), and gas (water vapor).

16. Correct Answer: (2) ii & iii

Explanation: Winnowing separates substances based on weight. Wheat grains and pulses, as well as rice flakes and potatoes, can be separated this way.

17. Correct Answer: (3) Erosion

Explanation: Erosion is the process that shapes valleys as rivers wear down the land over time.

18. Correct Answer: (3) Fibre < Yarn < Thread

Explanation: Fibre is the thinnest, followed by yarn and then thread.

19. Correct Answer: (2) Humus

Explanation: Humus is the organic, fertile component of soil that supports plant growth.

20. Correct Answer: (4) Both (1) and (3)

Explanation: Gases can be compressed easily, and they also fill the entire space of a container.

21. Correct Answer: (2) Churning

Explanation: Churning is a process used to separate cream from curd.

22. Correct Answer: (2) Fruit, Stem

Explanation: Coir is obtained from the fruit of a coconut, while jute is obtained from the stem of the jute plant.