

**KOTHARI INTERNATIONAL SCHOOL, NOIDA**  
**HALF YEARLY EXAMINATION, SESSION: 2025-26**  
**GRADE: 8 SUBJECT: SCIENCE**  
**SET A SECTION A (OBJECTIVE)**

**DAY & DATE: TUESDAY, 9 SEPTEMBER 2025**

**MAXIMUM MARKS: 20**

**NAME: \_\_\_\_\_**

**TIME ALLOTTED: 30 MINUTES**

**ROLL NO: \_\_\_\_\_**

**GENERAL INSTRUCTIONS:**

- i). *This question paper contains 20 questions. All questions are compulsory.*
- ii). *Question Nos. 1 to 20 carry 1 mark each.*
- iii). *There is no overall choice.*

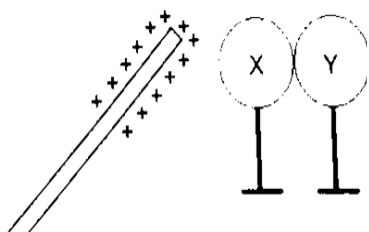
**SECTION A**

*Tick one correct option in each question.*

**Q1.** The frequency of a wave doubles while its speed remains constant. What happens to its wavelength? **(1)**

- a) Doubles                      b) Halves                      c) Remains the same                      d) Becomes zero

**Q2.** Two identical isolated metal spheres X and Y are in contact and initially uncharged. A glass rod is rubbed with silk and brought near X. The sphere Y is then removed away from X while the glass rod stayed near X. The signs of charges on the two spheres are. **(1)**



	Sphere X	Sphere Y
a)	+	-
b)	-	+
c)	+	0
d)	-	0

**Q3.** A ray of light after reflection makes an angle of reflection of  $40^\circ$ . What is the angle between the incident ray and the reflected ray? **(1)**

- a)  $10^\circ$                       b)  $80^\circ$                       c)  $40^\circ$                       d)  $70^\circ$

- Q4.** A scientist leaves a sealed test tube containing dry tobacco leaves and water droplets in sunlight. After a few days, he observes mosaic patterns probably a virus is observed on the leaves. What does this experiment prove? (1)
- a) They are active only outside living cells
  - b) They are not present in nature
  - c) They reproduce inside host cells
  - d) They are non-cellular organisms capable of photosynthesis
- Q5.** Which lens is used to correct myopia and why? (1)
- a) Convex lens – to diverge rays before entering eye
  - b) Concave lens – to diverge rays before entering eye
  - c) Convex lens – to converge rays onto retina
  - d) Concave lens – to converge rays onto retina
- Q6.** A student tightens the string of a guitar and notices that the pitch increases. Which statement best explains this? (1)
- a) Frequency decreases
  - b) Frequency increases, while speed of sound in air remains constant
  - c) Speed of sound increases with frequency in air
  - d) Amplitude increases, frequency decreases
- Q7.** A hydrocarbon burns in limited supply of oxygen inside a room. Which observation confirms incomplete combustion? (1)
- a) Blue flame and water droplets on the wall
  - b) Production of  $O_2$
  - c) Yellow flame and black soot deposition
  - d) No flame but only steam is formed
- Q8.** A paper cup filled with water is placed on a flame. The cup does not burn until all the water evaporates. Which concept explains this phenomenon the best? (1)
- a) Water reduces oxygen supply
  - b) Paper's ignition temperature is lowered by water
  - c) Water absorbs heat, preventing paper from reaching ignition temperature
  - d) Water reflects most of the heat radiation away

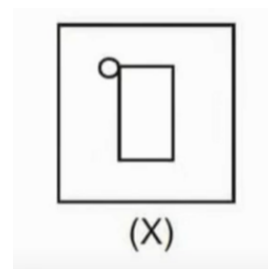
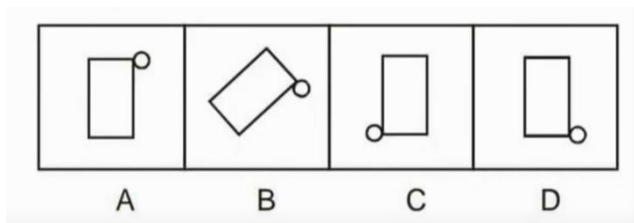
Q9. Paraffin wax is obtained as a fraction during fractional distillation of petroleum. (1)

Which property makes it useful for making Vaseline?

- a) It is solid at room temperature and non-reactive
- b) It is highly volatile and evaporates quickly
- c) It burns and releases O<sub>2</sub>
- d) It is the heaviest fraction of petroleum

Q10. Aakash placed a plane mirror on the upper edge of the figure. (1)

Which image will he see in the plane mirror?



Q11. When the amplitude of vibration is large, sound produced is (1)

- a) No sound
- b) feeble
- c) loud
- d) No relation between amplitude and sound

### SECTION B

The question below consists of an Assertion and a Reason. Use the following key to choose the appropriate answer.

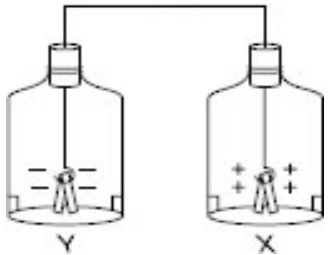
- A. Assertion and Reason are correct and reason is correct explanation of the assertion
- B. Assertion and Reason are correct, but the reason is not the correct explanation of the assertion.
- C. Assertion is correct, but Reason is incorrect.
- D. Assertion is incorrect, but Reason is correct
- E. Assertion and Reason both are incorrect.

Q12. **Assertion (A):** Antibiotics can stop the growth of harmful microbes.  
**Reason (R):** They are effective against both bacteria and viruses.

(1)

Q13. **Assertion (A):** Copper is an insulator.  
**Reason (R):** A copper wire allows charge to pass through it.

(1)

- Q14. Assertion (A):** The defect of cataract can be removed by using contact lens.  (1)  
**Reason (R):** Convex lens helps to converge rays before entering eye.
- Q15. Assertion (A):** A lightning conductor is placed on buildings.  (1)  
**Reason (R):** Non-metals resist (does not allow) charge transfer.
- Q16. Assertion (A):** The waves in which the individual particles of the medium move about their mean positions in a direction perpendicular to the direction of wave propagation, is known as Transverse waves.  (1)  
**Reason (R):** The loudness or softness of a sound is determined by its amplitude.
- Q17.** Which one of the following is the precaution to be taken during earthquake? (1)
- Stay near tall buildings.
  - Use lift to get to the ground floor of the building
  - Stay near the windows and walls until the earthquake stops.
  - Take shelter under heavy furniture.
- Q18.** Two electroscopes, one positively charged (X) and the other negatively charged (Y) are connected with a copper wire as shown in figure. Which of the following will happen? (1)
- Electrons will move from Y to X.
  - Protons will move from X to Y.
  - Electrons will move from X to Y.
  - Protons will move from Y to X.
- 
- Q19.** Which method is most effective for extinguishing an oil fire? (1)
- Water spray to cool below ignition temperature
  - Covering with sand to absorb oil
  - Using carbon dioxide gas to cut off oxygen supply
  - Allowing fire to burn till fuel is finished
- Q20.** Sound propagates maximum in (1)
- Air
  - Oil
  - Steel
  - It travels equally in all of them