



**Diagnostic Test for Std -9**

**Subject :- Science**

**Total Marks :- 80**

**Medium :- English**

**Time :- 3 Hours**

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- Q – 1** **Choose the correct option.** **10**
- 1 Which of the following is true?  
(A) The baby is male/female is determined by mother's chromosome.  
(B) The baby is male/female is determined by father's chromosome.  
(C) Pair of Mother's chromosome is X-Y .  
(D) Pair of Father's chromosome is X-X .
- 2 'In a tug-of-war , when the two teams are pulling the rope, a stage comes when the rope does not move to either side at all'. Which of the following is the correct reason for this?  
(A) Both teams have the same number of members.  
(B) There is a lot of competition going on between the two teams.  
(C) The net force of forces acting in opposite directions is equal to the difference between the two forces.  
(D) The net force of forces acting in opposite directions is equal to the sum of the two forces.
- 3 Which of the following does not happen due to friction?  
(A) A nail is fixed in the wall  
(B) fire can be produced with a matchstick.  
(C) heat is produced.  
(D) durability of chappals increases.
- 4 Which of the following are the benefits of special shape of an aeroplane?  
(i) Fluid friction is reduced.  
(ii) Fluid friction is increased.  
(iii) Energy loss is as low as possible.  
(iv) An aeroplane can fly like a bird.  
(A) (i), (ii) (B) (i), (ii), (iii) (C) (i), (iii), (iv) (D) (i), (ii), (iii),(iv)
- 5 Which of the following musical instruments uses air column to produce sound?  
(A) Veena (B) manjira(cymbals) (C) Flute (D) tabla
- 6 Which of the following is false for loudness of sound and amplitude of vibration?  
(A) Loudness of sound depends on its amplitude of the vibration.  
(B) Loudness of a sound is proportional to the square of the amplitude of the vibration producing the sound.  
(C) When the amplitude of vibration is large, the sound produced is loud.  
(D) If the amplitude of vibration is increased to 4 times of its initial value, then the loudness of sound becomes 6 times of its initial value.
- 7 Due to which of the following reasons Chromium plating is done on some objects used in everyday life?  
(i) Chromium is cheaper.  
(ii) Chromium has a shiny appearance.  
(iii) Chromium does not corrode.  
(iv) Chromium resists scratches.  
(A) (i), (ii), (iii) (B) (ii), (iii), (iv) (C) (i), (iii), (iv) (D) (i), (ii), (iii),(iv)

- 8 Which statement is incorrect regarding the reflection of light?  
 (A) The incident ray and the reflected ray are on opposite sides of the normal.  
 (B) If the angle of incidence is  $90^{\circ}$  then the reflected ray is emitted in the same direction.  
 (C) If the angle of incidence is  $45^{\circ}$  then the angle of reflection is  $45^{\circ}$ .  
 (D) If the angle of incidence is  $35^{\circ}$  then the angle of reflection is  $55^{\circ}$ .
- 9 Which of the following is not appropriate for the moon?  
 (A) Moon is visible due to reflected sunlight.  
 (B) The Earth along with the moon, revolves around the Sun.  
 (C) After full moon day, every night the size of the bright part of the moon, illuminated by the Sun, increases.  
 (D) On new moon day the moon appears black.
- 10 Which of the following are correct for the greenhouse effect?  
 (i)  $\text{CO}_2$  is mainly responsible for the greenhouse effect.  
 (ii) The gradual increase in the average temperature of the earth's atmosphere is called global warming.  
 (iii) Methane, nitrous oxide and water vapour are greenhouse gases like  $\text{CO}_2$ .  
 (iv) An increase in earth's temperature by as little as  $0.5^{\circ}\text{C}$  has no effect.
- (A) (i), (ii), (iii) (B) (ii), (iii), (iv) (C) (i), (iii), (iv) (D) (i), (ii), (iii), (iv)

- Q – 2 A Answer the following in brief: 04**  
 1 State one secondary sexual characters, for both a girl and a boy, that take place at puberty.  
 2 Write the difference: Audible sound and Inaudible sound
- Q – 2 B Classify the following into Contact forces and Non-contact forces. 06**  
 A rolling ball comes to rest, bring the unlike poles of the magnets in contact, pen slips off your hand, Lift a bucket of water, bring a straw rubbed with paper near the straw which is not rubbed with paper, carrying a load in bullock cart.
- Q – 3 Answer the following: 10**  
 1 Why porters place a round piece of cloth on their heads, when they have to carry heavy loads?  
 2 State the reason why water gets filled in the dropper when we press the bulb of a dropper before placing its nozzle in water.  
 3 Why can we hear?  
 4 Explain how you can take care of your eyes? (Write any two precautions)  
 5 How does air get polluted?
- Q – 4 Answer the following: 10**  
 1 The mother is not responsible for determining the sex of baby. Give reason.  
 OR  
 Teenagers should take special care of health during adolescence. Give reason  
 2 What is acid rain? How does it cause 'Marble cancer'?

- Q – 5      Answer in brief:      10**
- 1 Describe an activity that gives an understanding of ‘Electrostatic force’.
- OR
- Describe an activity that gives an understanding of ‘Electroplating’.
- 2 Explain multiple images by giving an example.State the number of images formed by constructing three different angles between mirrors.
- OR
- What precautions would you take to protect yourself from an earthquake, when you are at home and when you are outdoors?
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- Q – 6      Describe the procedure to make the sample of the following:      10**
- 1 Ektara OR a toy telephone
  - 2 A simple electroscope
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- Q – 7      Fill in the blanks.      05**
- 1 Friction is \_\_\_\_\_ when we sprinkle powder on the carrom board.
  - 2 Sliding friction is \_\_\_\_\_ than static friction.
  - 3 \_\_\_\_\_ is a safe place when it rains with thunder.
  - 4 Reduce, reuse and \_\_\_\_\_ should be our mantra!
  - 5 \_\_\_\_\_ can be seen in the eastern sky before sunrise and in the western sky just after the sunset.
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- Q – 8      Complete the table by stating measurements of angle of incidence or angle of reflection.      05**
- | angle of incidence | angle of reflection |
|--------------------|---------------------|
| 1. 15 <sup>0</sup> | .....               |
| 2. ....            | 50 <sup>0</sup>     |
| 3. ....            | 25 <sup>0</sup>     |
| 4. 80 <sup>0</sup> | .....               |
| 5. 90 <sup>0</sup> | .....               |
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- Q – 9      Draw a labelled sketch of the human eye.      04**
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- Q – 10      1 At an individual level, how can you help to reduce air pollution?      06**
- 2 What precautions will you take to prevent water pollution?

