

## **PHYSICS — Electrostatics (Basics Only)**

(10 questions)

1. What is the SI unit of electric charge?
  2. Name two properties of electric charge.
  3. Define conductor and give one example.
  4. Define insulator and give one example.
  5. State Coulomb's law (formula not required).
  6. Write the mathematical form of Coulomb's law.
  7. What is the superposition principle?
  8. What happens to electric force if distance between charges is doubled?
  9. Define electric field.
  10. What is the direction of electric field for a positive test charge?
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## **CHEMISTRY — Solid State (Introduction Only)**

(10 questions)

1. Name the four types of solids.
  2. Which type of solid has high melting point: ionic or molecular?
  3. Define crystal lattice.
  4. What is a unit cell?
  5. What is the difference between primitive and centered unit cells?
  6. Name one example of ionic solid.
  7. Metallic solids conduct electricity because of \_\_\_\_\_.
  8. Which solid is soft: covalent or molecular?
  9. Define coordination number (basic meaning).
  10. What is long-range order?
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## **MATHS — Relations & Functions (Part 1)**

(10 questions)

1. Define relation.
2. What is the domain of a relation?
3. What is the range of a relation?

4. Give an example of an ordered pair.
  5. If  $A = \{1,2\}$  and  $B = \{3,4\}$ , list ALL ordered pairs in  $A \times B$ .
  6. Check if the relation  $R = \{(1,1), (2,2), (3,3)\}$  on set  $\{1,2,3\}$  is reflexive.
  7. What is a symmetric relation?
  8. Is  $R = \{(1,2), (2,1)\}$  symmetric?
  9. Which relation on a set has all  $aRb$  true?
  10. Give one example of a real-life relation.
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 If you want the answers, say:

**“Give Day 1 answer key.”**

 If you want me to check YOUR answers, say:

**“Check my Day 1 answers.”**

 Ready for tomorrow whenever you are:

**Start Day 2 Plan**