

Here is your **Day 1 Answer Key**, perfectly matched to the Day-1 question set I gave earlier.

DAY 1 — ANSWER KEY

PHYSICS — Electrostatics (Basics)

1. Coulomb (C)
 2. Charge is quantized; charge is conserved
 3. Substance that allows flow of charges (e.g., Copper)
 4. Substance that does NOT allow flow of charges (e.g., Rubber)
 5. Force between two point charges is directly proportional to product of charges and inversely proportional to square of distance
 6. ($F = k \frac{q_1 q_2}{r^2}$)
 7. Net force is the vector sum of all individual forces
 8. Force becomes one-fourth
 9. Force experienced by a unit positive test charge
 10. Away from + charge, towards - charge
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CHEMISTRY — Solid State (Introduction)

1. Ionic, Covalent, Metallic, Molecular
 2. Ionic solids
 3. 3D arrangement of particles in a crystal
 4. Smallest repeating unit of a lattice
 5. Primitive: particles only at corners
Centered: particles at corners + additional point(s)
 6. NaCl (example)
 7. Delocalised electrons
 8. Molecular solids
 9. Number of nearest neighboring particles
 10. Particles arranged in a repeating pattern over long distance
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MATHS — Relations & Functions (Part 1)

1. A relation is a subset of (A \times B)
2. Set of first elements of ordered pairs
3. Set of second elements of ordered pairs
4. Example: (2,5)
5. If A={1,2}, B={3,4} \rightarrow
 $A \times B = \{(1,3), (1,4), (2,3), (2,4)\}$
6. Yes, because (1,1),(2,2),(3,3) are present
7. If $(a,b) \in R$ then (b,a) must also be in R
8. Yes
9. Universal relation (all possible pairs)
10. Example: “student has roll number” is a relation