✅ PHYSICS ANSWER KEY

1. Properties of electric field lines:
   - They start on + charges and end on – charges.
   - They never intersect.
2. Field lines around a positive charge: **Radially outward.**
3. Like charges: **Field lines repel / diverge.**
4. They never cross because **that would give two directions of E at the same point.**
5. Electric flux: **Measure of electric field passing normally through a surface.**
6. Formula: **$\Phi = E\,A\cos\theta$**
7. $\theta = 90° \rightarrow \Phi = 0$
8. If E is doubled → **Flux doubles.**
9. Electric flux is a **scalar** quantity.
10. SI unit: **$N \cdot m^2/C$** (or **$V \cdot m$**).

✅ CHEMISTRY ANSWER KEY

1. Three types of unit cells: **SC, BCC, FCC**
2. Coordination number (FCC): **12**
3. SC edge length formula: **$a = 2r$**
4. BCC relation: **$a = 4r / \sqrt{3}$**
5. In FCC, atoms touch along **face diagonal.**
6. Packing efficiency: **Percentage of space occupied by particles in a unit cell.**
7. Highest packing: **FCC (74%)**
8. Coordination number SC: **6**
9. Coordination number BCC: **8**
10. Edge length: **Length of one edge of a unit cell cube.**

✅ MATHS ANSWER KEY

1. Equivalence relation: **A relation that is reflexive, symmetric, and transitive.**
2. Properties: **Reflexive, Symmetric, Transitive**
3. Example: **aRb if $a - b = 0$**
4. $a - b = 0$ → Yes reflexive because **$a - a = 0$**

5. a divides b is **not symmetric** (e.g., 2 divides 4, but 4 does not divide 2).
6. Function: **A relation where each input has exactly one output.**
7. Domain: **Inputs**, Codomain: **Possible outputs.**
8. {(1,2), (1,3)} is **not** a function → same input (1) has two outputs.
9. **Vertical Line Test**
10. Real-life function: **Speed = f(time)**

🔁 MIXED REVISION ANSWER KEY

1. Coulomb's law: **$F = k\, q_1 q_2 / r^2$**
2. Conductor vs insulator:
   - Conductor: **Allows free movement of electrons**
   - Insulator: **Does not allow free movement of electrons**
3. Crystal lattice: **3D arrangement of points representing atoms/ions/molecules.**
4. Domain: **Set of all first elements in a relation.**
5. Electric field due to point charge varies as **$1/r^2$**

If you're satisfied:

👉 Say **"Start Day 4 Plan"**