

Great 

Here is your **Day 2 – Question Review** (quick revision + key points for every subject).

---

## **DAY 2 – QUESTION REVIEW**

---

### **PHYSICS — Electric Field Lines & Electric Flux**

#### **✓ What you should now know clearly**

- Electric field lines start from **+ charge** and end on **- charge**
- No two field lines ever **intersect**
- Field lines are **denser** where field is strong
- Flux measures **number of field lines passing through a surface**
- Gauss Law:  $(\Phi = \frac{Q_{\text{enclosed}}}{\epsilon_0})$

#### **✓ High-yield concepts (mostly asked in exams)**

- Behavior of field inside conductor = **0**
  - Field lines are **perpendicular** to conductor surface
  - Flux depends only on **charge enclosed**, not shape
  - If charge is outside  $\rightarrow$  **flux = 0**
- 

### **CHEMISTRY — Solid State (Unit Cell, Packing, Voids)**

#### **✓ Must-understand points**

- **Packing efficiency** trend:
  - Simple cubic = 52%
  - BCC = 68%
  - FCC = 74% (maximum)
- Coordination numbers:
  - SC = 6
  - BCC = 8
  - FCC = 12
- Types of voids:
  - Tetrahedral (2 per atom)
  - Octahedral (1 per atom)

## ✓ Formulas

- SC:  $(a = 2r)$
  - BCC:  $(a = \frac{4r}{\sqrt{3}})$
  - FCC:  $(a = 2\sqrt{2}r)$
- 

## MATHS — Functions (Part 2: Types, Domain & Range)

### ✓ What you must understand

- Function = relation where every **input has exactly one output**
- Domain  $\rightarrow$  all valid x
- Range  $\rightarrow$  corresponding y values
- Types:
  - One-one (injective)
  - Onto (surjective)
  - Bijective = both
- Composite function ( $f(g(x))$ )

### ✓ Common exam traps

- Square root  $\rightarrow$  output  $\geq 0$
  - Log  $\rightarrow$  inside argument  $> 0$
  - Division by zero not allowed
  - For inverse function:
    - Function **must be bijective**
- 

## Overall Day 2 Summary

You have now covered:

### Physics

$\rightarrow$  Field Lines, Flux, Gauss Law

### Chemistry

$\rightarrow$  Packing, Voids, Coordination Number

### Maths

$\rightarrow$  Domain, Range, Type of functions

These are core, frequently repeated JEE/CUET competitive concepts.

---

If you want:

👉 **I can now give Day 2 Answer Key**

or

👉 **Start Day 3 Plan**