Absolutely, Salman! Here's a **set of practice questions** for the **4 major CPU scheduling algorithms**, covering both **preemptive** and **non-preemptive** versions wherever applicable. Each question includes the **format**, **steps you should follow**, and **what to calculate** — great for practicing Gantt charts, waiting time, and turnaround time.

**🔷 1. First-Come, First-Served (FCFS) – Non-Preemptive**

**🔹 Practice Question:**

| **Process** | **Arrival Time** | **Burst Time** |
| --- | --- | --- |
| P1 | 0 | 5 |
| P2 | 2 | 3 |
| P3 | 4 | 1 |
| P4 | 6 | 2 |

**🧠 Steps to Practice:**

1. Sort processes by **Arrival Time**.
2. Build the **Gantt Chart** in order of arrival.
3. Calculate:
   * **Completion Time (CT)**
   * **Turnaround Time (TAT) = CT - Arrival Time**
   * **Waiting Time (WT) = TAT - Burst Time**

**🔷 2. Shortest Job First (SJF) – Non-Preemptive**

**🔹 Practice Question:**

| **Process** | **Arrival Time** | **Burst Time** |
| --- | --- | --- |
| P1 | 0 | 8 |
| P2 | 1 | 4 |
| P3 | 2 | 2 |
| P4 | 3 | 1 |
| P5 | 4 | 3 |

**🧠 Steps to Practice:**

1. At every process arrival, **select the shortest available burst time**.
2. Use **Gantt Chart** to show execution.
3. Calculate **CT, TAT, WT** for each process.

**🔷 3. Shortest Remaining Time First (SRTF) – Preemptive version of SJF**

**🔹 Practice Question:**

| **Process** | **Arrival Time** | **Burst Time** |
| --- | --- | --- |
| P1 | 0 | 7 |
| P2 | 2 | 4 |
| P3 | 4 | 1 |
| P4 | 5 | 4 |

**🧠 Steps to Practice:**

1. Track time unit by unit.
2. At each time, pick the process with **shortest remaining time**.
3. Preempt if a new process with shorter time arrives.
4. Draw a **detailed Gantt Chart**.
5. Calculate **Completion, TAT, WT**.

**🔷 4. Priority Scheduling – Both Preemptive & Non-Preemptive**

**🔹 Practice Question (Non-Preemptive):**

| **Process** | **Arrival Time** | **Burst Time** | **Priority** |
| --- | --- | --- | --- |
| P1 | 0 | 5 | 2 |
| P2 | 1 | 3 | 1 |
| P3 | 2 | 4 | 3 |
| P4 | 3 | 2 | 2 |

Lower number = Higher priority

**🧠 Steps:**

1. At each process arrival, choose the one with **highest priority**.
2. Once a process starts, it **runs to completion** (non-preemptive).
3. Build Gantt Chart → calculate **CT, TAT, WT**.

**🔹 Practice Question (Preemptive Priority):**

| **Process** | **Arrival Time** | **Burst Time** | **Priority** |
| --- | --- | --- | --- |
| P1 | 0 | 10 | 3 |
| P2 | 2 | 1 | 1 |
| P3 | 4 | 2 | 4 |
| P4 | 5 | 1 | 2 |

Lower number = Higher priority

**🧠 Steps:**

1. At every time unit, check if a new **higher-priority** process arrived.
2. Preempt the current process if needed.
3. Gantt chart must show switches.
4. Calculate all metrics.

**🔷 5. Round Robin – Preemptive**

**🔹 Practice Question:**

| **Process** | **Arrival Time** | **Burst Time** |
| --- | --- | --- |
| P1 | 0 | 5 |
| P2 | 1 | 4 |
| P3 | 2 | 2 |
| P4 | 3 | 1 |

* **Time Quantum = 2 units**

**🧠 Steps:**

1. Use a **queue** (FIFO) to track ready processes.
2. Each process gets up to 2 units in one turn.
3. If not finished, it goes to the end of the queue.
4. Update Gantt chart, and calculate metrics.

**✅ Tip for Practicing:**

Make a table with these columns:

* **Process**
* **Arrival Time**
* **Burst Time**
* **Completion Time (CT)**
* **Turnaround Time (TAT)**
* **Waiting Time (WT)**