KLA Round-2 Coding – 1 Page Notes (with Code)

1. Wafer as Grid

• Treat wafer as 2D matrix, use BFS

```
dirs = [(1,0),(-1,0),(0,1),(0,-1)]
```

2. Direction Handling

• Move based on direction map

```
dx,dy = {'U':(-1,0),'D':(1,0),'L':(0,-1),'R':(0,1)}[d]
```

3. Defect Detection

• Count connected defect clusters

```
if grid[i][j]==1 and not vis[i][j]: bfs(i,j)
```

4. Defect Severity

• Classify by value range

```
if x<5: 'Minor' elif x<=10: 'Major' else 'Critical'
```

5. Sequential Scheduling

• Tasks run one after another

```
total_time = sum(times)
```

6. Concurrent Scheduling

• Tasks run in parallel

```
total_time = max(times)
```

7. Mixed Scheduling

• Parallel + sequential stages

```
time = max(parallel) + sum(seq)
```

8. Sequence Validation

• Check invalid adjacent pattern

```
for i in range(n-1): if s[i]=='D' and s[i+1]=='D': invalid
```

9. Wafer Scan Pattern

• Spiral / directional traversal

```
top+=1; right-=1; bottom-=1; left+=1
```

10. Wafer Quality Check

• Reject if defect % exceeds limit

```
status = 'Reject' if (d/t)*100 > th else 'Accept'
```

Golden Rule: Explain → Code → Time Complexity