



DEV BHOOMI UTTARAKHAND UNIVERSITY

Placement Oriented Training – Question Bank Topic: Pattern Based Programming

Trainer: Mr. Mukesh Kumar

This question bank is designed to strengthen logical thinking and coding skills required for placement-oriented programming rounds. The difficulty level progresses from basic patterns to advanced reset-based patterns frequently asked in service-based and product-based company interviews.

SECTION A: SIMPLE PATTERN QUESTIONS

Q1. Right-Angled Star Triangle

```
*  
**  
***  
****  
*****
```

Q2. Inverted Number Pattern

```
12345  
1234  
123  
12  
1
```

Q3. Same Number Pattern

```
1  
22  
333  
4444
```

Q4. Alphabet Increasing Pattern

```
A  
AB  
ABC  
ABCD
```

Q5. Hollow Square Pattern

```
*****  
*      *
```

* *

* *

* * * * *

SECTION B: INTERMEDIATE PATTERN QUESTIONS

Q6. Centered Star Pyramid

```
  *
 ***
*****
*****
```

Q7. Inverted Centered Pyramid

```
*****
 *****
  ***
   *
```

Q8. Diamond Star Pattern

```
  *
 ***
*****
*****
 *****
  ***
   *
```

Q9. Floyd's Triangle

```
1
2 3
4 5 6
7 8 9 10
```

Q10. Binary Pattern

```
1
01
101
0101
10101
```

Q11. X Pattern

```
*   *
 *  *
  *
 *  *
*   *
```

Q12. Hourglass Pattern

```
*****
 ***
  *
 ***
*****
```

Q13. Pascal's Triangle

```
1
1 1
1 2 1
1 3 3 1
```

Q14. Palindromic Number Pyramid

```
  1
 121
12321
1234321
```

Q15. Zig-Zag Star Pattern

```
*   *   *
* * * *
*   *
```

SECTION C: ADVANCED & RESET-BASED PATTERN QUESTIONS

Q16. Reset Number Triangle

```
1
1 2
1 2 3
1 2 3 4
```

Q17. Reverse Reset Pattern

```
1 2 3 4
1 2 3
1 2
1
```

Q18. Continuous + Reset Mixed Pattern

```
1
2 3
4 5 6
1
2 3
4 5 6
```

Q19. Row Reset Alphabet Pattern

```
A
A B
A B C
A B C D
```

Q20. Column Reset Pattern

```
1 1 1 1
2 2 2 2
3 3 3 3
4 4 4 4
```

Q21. Numeric Diamond Pattern

```
9 8 7 6 5 4 3 2 1
 8 7 6 5 4 3 2
  7 6 5 4 3
   6 5 4
    5
   4 5 6
  3 4 5 6 7
 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9
```

Q22. Alphabet Diamond Pattern

```
I H G F E D C B A
 H G F E D C B
  G F E D C
   F E D
    E
   D E F
  C D E F G
 B C D E F G H
A B C D E F G H I
```

Q23. Concentric Square Pattern

```
4 4 4 4 4 4 4
4 3 3 3 3 3 4
4 3 2 2 2 3 4
4 3 2 1 2 3 4
4 3 2 2 2 3 4
4 3 3 3 3 3 4
4 4 4 4 4 4 4
```

Q24. Single Loop Pattern

```
*
**
***
****
*****
```

Q25. Reset-Based Alternating Pattern

```
1
A B
1 2 3
A B C D
1 2 3 4 5
```