ZOHO CORPORATION

Placement Test Paper 2025

Software Developer - Campus Recruitment

ROUND 1: APTITUDE & C PROGRAMMING
- Total Questions: 20 (10 Aptitude + 10 C Programming)
- Time Duration: 60 minutes
- No negative marking
- This is a pen-paper based test
- Write answers clearly in the answer boxes provided

SECTION A: QUANTITATIVE APTITUDE (10 Questions)

1. A man buys an article for ₹800 and sells it at a profit of 20%. If he gives a discount of 10% on the marked price, find the marked price.

2. A can complete a work in 15 days and B can complete the same work in 20 days. If they work together for 4 days and then A leaves, in how many more days will B complete the remaining work?

3. A train 120m long is running at 60 km/hr. In what time will it pass a man who is running at 6 km/hr in the same direction?

4. The ratio of ages of A and B is 3:4. After 6 years, the ratio will be 4:5. Find the present age of A.

5. In a mixture of 60 litres, the ratio of milk to water is 2:1. How much water should be added to make the ratio 1:2?

6. Find the compound interest on ₹8000 for 2 years at 15% per annum compounded annually.

7. The average of 20 numbers is 45. If two numbers 55 and 65 are removed, what is the new average?

8. A sum becomes ₹2420 in 2 years and ₹2662 in 3 years at compound interest. Find the rate of interest.

9. If the probability of selecting a red ball from a bag is 1/4 and there are 6 red balls, how many total balls are there?

10. A clock gains 15 minutes in 24 hours. How much time will it gain in 6 days?

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Placement Test Paper 2025 (Continued)

SECTION B: C PROGRAMMING OUTPUT QUESTIONS (10 Questions)

Find the output of the following C code snippets:

11. What will be the output?

```
#include
int main() {
    int x = 5, y = 10;
    printf("%d %d", x++, ++y);
    return 0;
}
```

12. What will be the output?

```
#include
int main() {
    int arr[] = {1, 2, 3, 4, 5};
    printf("%d", *(arr + 3));
    return 0;
}
```

13. What will be the output?

```
#include
int main() {
    char str[] = "ZOHO";
    printf("%c %c", str[1], *(str + 2));
    return 0;
}
```

14. What will be the output?

```
#include
int main() {
    int i = 3;
    switch(i) {
        case 1: printf("One");
        case 2: printf("Two");
        case 3: printf("Three");
        default: printf("Default");
    }
    return 0;
}
```

15. What will be the output?

```
#include
int func(int x) {
    if(x <= 1) return 1;
    return x * func(x - 1);
}
int main() {
    printf("%d", func(4));
    return 0;
}
```

16. What will be the output?

```
#include
int main() {
    int a = 10, b = 20;
    int *p = &a, *q = &b;
    printf("%d", *p + *q);
    return 0;
}
```

17. What will be the output?

```
#include
int main() {
    for(int i = 0; i < 3; i++) {
        for(int j = 0; j <= i; j++) {
            printf("*");
        }
        printf("\n");
    }
    return 0;
}
```

18. What will be the output?

```
#include
int main() {
    int x = 5;
    printf("%d %d %d", x, x << 1, x >> 1);
    return 0;
}
```

19. What will be the output?

```
#include
int main() {
    char c = 'A';
    printf("%d %c", c, c + 1);
    return 0;
}
```

20. What will be the output?

```
#include
int main() {
    int arr[3][3] = {{1,2,3},{4,5,6},{7,8,9}};
    printf("%d", arr[1][2] + arr[2][1]);
    return 0;
}
```


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ROUNDS 2 & 3: Programming Challenges

ROUND 2: BASIC PROGRAMMING
- 3 coding problems • Time: 90 minutes • Code on laptop/system
- Focus on logic, loops, arrays, and basic data structures

ROUND 2: CODING PROBLEMS

1. Pattern Printing EASY

Write a program to print the following pattern for n=4:

```
1
12
123
1234
```

Input: n = 4
Output: Above pattern

2. String Character Count EASY

Given a string and a character, count the number of occurrences of that character in the string.

Example:
Input: str = "programming", ch = 'r'
Output: 2

3. Array Sorting MEDIUM

Sort elements at odd positions in descending order and elements at even positions in ascending order.

Example:
Input: [13, 2, 4, 15, 12, 10, 5]
Output: [13, 2, 12, 10, 5, 15, 4]

4. String Expansion MEDIUM

Expand a string where numbers indicate repetition count.

Example:
Input: "a3b10"
Output: "abbbbbbbbbb"

5. Text Sorting by Word Frequency HARD

Sort texts by ascending order of occurrences of a given word.

Example:
Input: 3 texts, word = "python"
Sort texts by count of "python" occurrences

ROUND 3: ADVANCED PROGRAMMING
- 1-2 complex problems • Time: 2-3 hours • System design elements
- Focus on OOP concepts, modularity, and real-world applications

ROUND 3: ADVANCED PROGRAMMING CHALLENGE

1. Taxi Booking System HARD

Problem: Design a taxi booking system with the following requirements:

- 4 taxis available, all start at point A
- 6 points total: A, B, C, D, E, F (each 1km apart)
- Travel time: 60 minutes between adjacent points
- Fare: ₹200 for first 5km, ₹150 for each additional km
- Assign nearest available taxi

Implement:

1. **Book Taxi:** Input customer ID, pickup point, drop point, pickup time
2. **Print Taxi Details:** Show all taxi earnings and trip history

Sample Input/Output:

```
Input: Customer ID: 1, Pickup: A, Drop: B, Time: 9
Output: Taxi-1 allotted

Input: Customer ID: 2, Pickup: B, Drop: D, Time: 9
Output: Taxi-2 allotted
```

Design Considerations:

- Use OOP principles (classes for Taxi, Booking, Customer)
- Implement proper data structures for tracking
- Handle edge cases (no available taxi, invalid input)
- Code should be modular and well-commented