Lucid Imaging

Name: _____ Tel Number: _____

Degree & Branch: _____ Email id: _____

INSTRUCTIONS

- **Part A contains 10 questions and Part B contains 10 questions. Time limit is a strict 60 minutes.**
- **MARK THE ANSWERS NEATLY from the choices given.**

PART A - QUANTITATIVE APTITUDE QUESTIONS

1) Find the odd man out. 12, 21, 32, 45, 60, 77, 95

A. 95
B. 45
C. 32
D. 21

2) A man can row 7.5 kmph in still water and he finds that it takes him twice as long to row up as to row down the river. Find the rate of stream.

A. 10 km/hr
B. 2.5 km/hr
C. 5 km/hr
D. 7.5 km/hr

3) 9 examiners can examine a certain number of answer books in 12 days by working 5 hours a day. How many hours in a day should 4 examiners work to examine twice the number of answer books in 30 days?

A. 9
B. 10
C. 11
D. 12

4) The sum of the ages of a father and son is 45 years. Five years ago the product of their ages was 4 times the father's age at that time. The present ages of the father and son, respectively are,

A. 25 years, 10 years
B. 36 years, 9 years
C. 39 years, 5 years
D. none of these

5) A student who secures 20% marks in an examination fails by 30 marks. Another student who secures 32% marks gets 42 marks more than those required to pass. The percentage of marks required to pass is :

A. 20
B. 25
C. 28
D. 30

6) A sold consists of a circular cylinder with an exact fitting right circular cone placed on the top. The height of the cone is h. If the total volume of the solid is three times the volume of the cone, then the height of the cylinder is :

A. 2 h
B. 4 h
C. 2h/3
D. 3h/4

7) A, B and C run around a circular track of length 1200 m with respective speeds 9, 18, 27 kmph. If they started at the same time from the same point and run in the same direction when will they meet for the first time?

A. 360 sec
B. B. 480 sec
C. 240 sec
D. D. None

8) A car reached a certain place 'Q' from 'P' in 35 min with an average speed of 69 kmph. If the average speed is increased by 36 kmph, then how long will it take to cover the same distance?

A. 25 minutes
B. 23 minutes
C. 27 minutes
D. 29 minutes

9) N is the smallest number which when added to the 2000 makes the resulting number divisible by 12, 16, 18 and 21, Then the N is

A. 11
B. 7
C. 9
D. 16

10) Pankaj gave 50 percent of the amount to Akash. Akash in turn gave two-fifth of the amount to venu. After paying a bill of 500 rupees, venu now have 8000 rupees left with im. Find the amount hold by pankaj initially.

A. 41500
B. 42500
C. 43500
D. 44500

Lucid Imaging

PART B -PROGRAMMING QUESTIONS

1. To create a linked structure, each element must have one member that is a
   A. reference to the element type B. pointer to NULL
   C. pointer to the element type D. pointer to the head of the list

2. What will be the output when following code is executed

```
int main()
{
    float f = 10.0;
    printf("\n f=%d", f);
    return 0;
}
```

   A. 10.0 B. 10 C.0 D.Garbage Value

3. Which of the following declares a to be a const pointer to an integer?
   A. int const a; B. const int *a; C. int * const a; D. intconst * a const

4. What output is produced by the following code?

```
int main()
{
    char str[] = "basic";
    char *s = str;
    printf("\n%s",s+++3);
    printf("\t%s",s);
    return 0;
}
```

   A. ic asic B. c basic C. asic sic D. cc

5. Consider the following code:

```
int x[] = {0, 1, 2, 3};
int temp, i = 0, j = 3;
while (i < j)
{
    temp = x[i];
    x[i] = x[j];
    x[j] = 2*temp;
    i++;
    j--
}
```

After this code is executed, the array x stores the following values:
   A. {0, 1, 2, 3} B. {0, 2, 4, 6} C.{3, 2, 1, 0} D.{3, 2, 2, 0}

6. What output is produced by the following code?

```
#include<conio.h>
void main()
 {
    char s[]= {'a','b','c','d','c','\0'};
    cha  *p,*str,*str1;
    p = &s[3];
    str1 = s;
    printf("%d",++*p + ++*str1 - 32);
 }
```

A. 166 B. 167 C. 168 D. None of the above

7. What output is produced by the following code?

```
#include<stdio.h>
int main()
 {
    printf("%d, %d, %d", sizeof(3.0), sizeof('3'), sizeof(3.0f));
    return 0;
}
```

A. 8, 1, 4 B. 4, 1, 4 C. 8, 2, 4 D. 10, 2,

8. What output is produced by the following code?

```
#include<stdio.h>
void main()
{
    static int var = 5;
    printf("%d",var--);
    if(var)
    main();
}
```

A. 5 5 5 5 5
C. 5 4 3 2 1 0 B. 5 4 3 2 1
D. Infinite loop

9. What output is produced by the following code?

```
#include<stdio.h>
void main()
{
    printf("%x",-1<<4);
}
```

A. 0 B. fff0 C. 10 D. ffe0

10. An identifier must begin with a

A. letter or digit and can contain letters, digits, or underscores
B. digit and can contain letters, digits, or underscores
C. letter, digit, or underscore and can contain letters, digits, r underscores
D. letter or underscore and can contain letters, digits, or underscores

Lucid Imaging

PROGRAMMING TEST

Name: _____ Tel Number: _____

Degree & Branch: _____ Email id: _____

Problem Statement

John gives Ryan an array of integers and he asks whether the given array is balanced or not An array is said to be balanced if there exists an element of the array such that the sum of all elements to the left is equal to the sum of all elements to the right For instance given the array 14.3.2.7]. 2 is between 4+3=7 and 7

Input

The first line contains T the number of test cases. The first line of each test case consists of an integer N denoting the number of elements in an array. The second line of each test case consists of N-space separated integers denoting the array

Output

Print "Yes if it is a balanced array else print "No" without quotes

Constraint

1<=T=10, 1<=N<=10^3, 1<=Array elements<=10^4.

Sample Input -1

No of test cases- 3
No of Elements for case 1: 3
Enter elements for case 1: 1 2 3
No of Elements for case 2: 4
Enter elements for case 2: 1 2 3 3
No of Elements for case 3: 6
Enter elements for case 3: 1 2 3 4 5 10

Sample Output

Result for Case 1 : No
Result for Case 2 : Yes
Result for Case 3 : Yes

CIRCULAR PRIME

"Write a program in C to display **all** circular prime numbers below a given integer. A circular prime number is a prime number and whose all rotations of digits are themselves prime."

For example :

- 197 is a circular prime number because all rotations of 197, 971 and 719 are prime numbers.
- 1931 is a circular prime number because all rotations of 1931, 1193, 3119, 9311 are prime numbers.

Print the Circular prime numbers until **N**

Input:

First line of input contains a single integer **N**, the upper Limit.

Output:

Print all the Circular numbers <= N.

Constraints:

- $1 \leq N \leq 65536$

Example:

Sample Input:

Enter a number : 20

Output :

2
3
5
7
11
13
17

QUESTION A

ANSWER KEY

QUANTITATIVE APTITUDE

1) A
2) B
3) A
4) B
5) B
6) C
7) B
8) B
9) D
10) B

PROGRAMMING ANSWERS

1) C
2) C
3) C
4) A
5) D
6) B
7) C
8) B
9) B
10) A

ELECTRICAL ANSWERS.

1) B
2) D
3) B
4) B
5) B
6) C
7) A
8) A
9) B
10) B.