

Virtusa Sample Placement Papers IIT 2003

1. In how many different ways, a rectangle can be cut into 4 identical parts.
2. Using the numbers 1, 2, 25, 50, 75, 100 Exactly one time, give an expression which will give the answer as 383.
3. Volume of sphere is $(PI) \cdot (Theta)$ Cubic-meters and Surface area is $(PI) \cdot (Epsilon)$ Square-meters And both are digit integer numbers. What is the value of radius?
4. In the figure given below, Replace '?' mark by any operator (+, -, *, /, =) and if we leave as it is, numbers are considered together and forms either 2 or 3 digit number. Generate an expression using some symbols.

```
-----  
| ? | 2 | ? | 3 |  
-----  
| 2 | | ? |  
-----  
| ? | | 1 |  
-----  
| 6 | ? | 1 | ? |  
-----
```

5. Analyse the Programe

```
main()  
{  
  int x=1,y=1;  
  while( (x > 0) && (y > 0) )  
  {  
    printf("%16d%16d",x,y);  
    x += y;  
    y += x;  
  }  
}
```

6. Start from a random number, generate a sequence such that if number is odd multiply it 3 and add 1. If number is even, divide the number by 2. This Sequence will always cyclic with 4, 2, 1. In this sequesce, find the maximum power of 2 generaged in the sequence and print only the power, not the sequence.
7. Start with a random 2 digit number, The series is generated by multiplying the number by 2 and placing the last 2 digits as the next number. Series continues until one of the element repeats.
8. write a function maxsubstring(str,alpha,theta) str is the source string and have to return maximum sub string which starts with alpha and ends with theta.

INTERVIEW

9. what will this line will do? if it is legal? `B -= (B < 0) * 2 * B;`

10. what does this function do??

```
int f(int p)
{
  int i = 0, t = 1, s = 1;
  while( s <= p)
  {
    i++;
    t += 2;
    s += s;
  }
  return i;
}
```

11. Explain What is divide and conquer method? Travelling salesman problem What is greedy method

12. How Neural Networks and A.I are related.

13. Tell me something about your self

14. Where will you see your self after 5 years

15. You want to shift your career to management side or be in technical side?

16. What you do in free time

17. Interests other than studies

18. How do you rate your self in 'C' Programming