# Virtusa Sample Paper 1

section I  duration 20 min total marks 30

1. A problem from sum of  Alphabets are given numbers from 1 - 9 we hav to assign numbers to alphabets  and A+B+C= something like that we have to know value of E ( Ans : 4)

2. x^y=2x+y and given that 2^a=a^3 find value of a?(Ans : a=1)

3. In an exam consists of 150 questions, 50 questions are of mathematics and remaining are others. In which twice the time is to be given to mathematics bit when compared to others.total time is 3 hrs then how much time is to be given to each bit of mathematics? (Ans : 72 sec or 1 min 12 sec)

4. In an multiple choice question paper, each correct answer carries 4 marks and each wrong answer deducts 2 marks. a person scores 480 marks in a 150 questions paper how many questions he did correctly? (Ans :130)

5. A bag contain 5 red and 7 green balls and another bag contain some no. of red and green balls.He asked to find probability of finding a red ball.

6.  A can do a work in 6 days B can do same work in 8 days, C can complete the same in 12 days.A under took 3 works like that and did for 8 days and left. Then B started work and did for some days and left then in how many days C completes this work?

7. y=inv(cos[cosx+4sinx]/sqrt17) then dy/dx=? (Ans :1)

8. total M persons want to buy a gift of D Rs. Out fo which 3 members are dropped out so how much each person have to pay extra ? (Ans:3D/m(m-3) )(check)

9. A problem is on series 1 + 1(1+1/n)+3(1+1/n)2(square)+5(1+1/n)3(cube)+.................find sum of n terms
( I not did this problem)

10. A monkey trying to ascend a greesy pole.He ascends 20 mtrs in one minute and goes down 4 mtrs in next minute.how much time it will take to ascend pole of 96 mtrs? (Ans:10 min 48 sec)

11. On a good if 25% discount is given, he will earn profit of 25% what will be profit if he gives 10% discount?
(Ans:50%)

12. A container has 64 lit of alcohol. 8 lit of which is removed and added with same amt of water. the same process is repeated 3times. what is the percentage of alcohol after the end of the operations.
    ans- formula – intial vol – p lit(64).
    vol of removed sol – q lit(8).
    no of oprs – n(3).
    concentration of first liquid afetr oprts is – ((p-q)/p)*((64-8)/64)**3.

13. x+y+z=0, find the value of (x**3+y**3+z**3)/xyz.

14. 3 men n 2boys can do piece of work in 12 days. same work is done by 6men n 1 boy in 6 days. find how many days can a man alone can complete the work?

15. In an exam the maximum marks is 500. a got 20% more than b, b got 25% less than c, c got 20% more than d. if b marks are 360 then how much did d score? (no. r different prob type is the same.).

16. A tank holds 25 gallons of fuel. before going for a drive which is at a distance of 600 miles. the car goes at a speed of 60 miles per/ hr. however the tank has a hole and fuel leaks out . after travelling a distance of 300 miles, the tank gets emptied. find rate at which fuel gets lost.

Section II    Duration :20 mins          Marks :20

This paper is on C language

1. Write a program to know whether string is palindrome or not?

2. A C program is given and asked what will be output.............

3. A Recursive function is given asked what will be output how and why?

4. write a prg / function to remove the duplicate from a sorted array. (8 m)

5. write a prg to genrate fibonacci series upto 100 recursively.  (7 m)

6. predict the output of the following:
    ```
    char c[]={ " enter" , "first" , "print" , "new" }.;
    char **cp[]={c+3, c+2, c+1, c};
    char ***cpp[]=cp;
    printf("%s", ++*cp);
    printf("%s",--*++cp);
    ```

7. Write a program to sort linked list.

Section III :     Essay writing:

1)Time and tide wait for none.

2)My vision 2020 of India.