B.C.A. (SEMESTER-I) SUPPLEMENTARY EXAMINATION, MAY/JUNE 2016
PROBLEM SOLVING AND PROGRAMMING CONCEPTS

Duration: 2 Hours   **Marks: 50**

Instructions: 1. All questions are compulsory.
              2. Figures to the right indicate marks.

Q.1.A.State whether the following statements are True or False.   (5*1=5)
    i. Only one function may be named main().
    ii. The scanf function can be used to read only one value at a time.
    iii. All arithmetic operators have the same level of precedence.
    iv. A char type variable cannot be used as a subscript in an array.
    v. The gets function automatically appends the null character at the end of the
       string read from the keyboard.

Q.1.B. Find errors, if any, in the following code.   (2*1=2)
    i. float values[10,15];
    ii. char s1[5], s2[10];
       gets(s1,s2);

Q.1.C. Predict Output of the following Code.   (2*1.5=3)
i.
```
main()
{
int x=100,y=200;
printf("%d", (x>y)?x:y);
}
```
ii.
```
main()
{
char string[]="hello world";
int m;
for(m=0;string[m]!='\0';m++)
if((m%2)==0)
printf("%c", string[m]);
}
```

Q.2.A. Who designed C language?   (2)
Q.2.B. State and explain primary data type.   (3)
Q.2.C. Write a program to swap contents of two variables.   (5)

Q.3.A. State the advantages of functions. (2)
Q.3.B. With an example, explain the use of go-to statement. (3)
Q.3.C. Write a program to find minimum element from a 2*2 matrix. (5)

Q.4.A.What are the rules for naming a C variable? (2)
Q.4.B.What is a pointer? State the benefits of pointers. (3)
Q.4.C.Write a program to check entered number is an Armstrong number. (5)

Q.5.A.State the use of continue statement. (2)
Q.5.B.Differentiate between putchar() and puts(). (3)
Q.5.C.Write a program illustrating the use of structures. (5)

XXXXXXXXXXXX