Registration No:

Total Number of Pages :3

B.TECH. DEGREE EXAMINATION-Nov-Dec.2018
End Semester Examination-I Semester
BBSES1050- Programming in C
(Regulations 2017)(Common to all Branches of Engineering)

Time : 3 Hours   Maximum : 100 Marks   Question Code:191712

Answer ALL Questions
PART-A (10 X 2=20 Marks)

1   a. The operator ''++'' adds the value ……… to the operand.   [CO1PO1]
           a) 1   b) 2   c) 3   d) 4

     b. The standard mathematical functions are included in the ------------header file.   [CO1PO1]
           a) mats.h b)(Phys.h   c) math.h d)(math1.h

     c. …… is the format specifier for long int and -------- is for float type.   [CO2PO1]
           a)   %ld   %f   b)) %ld   f   c) ld   %f   d)   ld f

     d.   An immediate exit from the loop can be achieved by a ------------ statement.   [CO2PO1]
           a)   stop   b) end   c) break   d) over

     e. …….statement is used to return control from called function to calling   [CO2PO1]
         statement.(return)
           Option :a)   control   b) called   c) calling   d) return

     f. char *p=''hello friends''; It is valid or invalid …….   [CO3PO3]
         (a)invalid   (b) valid   (c) true, (d) Non of these

     g. Given: [CO3PO3]
           int x,y,z,q;
           x=10; y=5; z=3;
           q=x>y>z;
           the q value is …..
              Option: (a) 0   (b) 1 (c) 2 (d) 3

     h. struct date{ char a,b,c; } x;   [CO4PO3]
                   printf("%d",sizeof(x));
                   the size of x is -------bytes.
                   Option (a) 2 (b) 3 (c) 4 (d) Non of these

     i. int x=25,*p,**q;   [CO4PO4]
                   p=&x; q=&p;
                   printf("%d",**q);
                   the output is ------
                   Option (a) 25   (b) 28   (c)10 (d) Non of these

     j. main()   [CO4PO4]
                   { int i=3;
                   do{   printf("%d",i);   }while(--i>0);
                   return 0;
                   }
                             Output is ---
           Option: (a) 3 2 1   (b) 4 2 1   (c) 2 3 1 (d) Non of these

PART-B (10 X 2=20 Marks)

2 a. What are the rules for naming an identifier?   [CO1PO1]

b. Write an example on usage of conditional operator.   [CO1PO1]

c. What is an array? How to initialize values to a 1D array during its declaration.   [CO2PO1]

d. What is a recursive functions, write an example?   [CO2PO1]

e. What is the role of return statement in a function? Can we write a function which can return more than one value using return statement?   [CO2PO1]

f. What is bit field in structure?   [CO3PO1]

g. Write an example on nested structure.   [CO3PO1]

h. Identify valid and invalid statements below: [CO3PO2]

```
int a+b;
char long;
int x,y,z,p,q,w,e,r,t,y,u,i;
float QWE_TY;
```

i. What will be the output and why?   [CO4PO2]

```
#include <stdio.h>
#define   A    1 + 2
#define   B    3 + 4
int main()
{
int var = A * B;
printf("%d\n", var);
}
```

j. Find output and justify   [CO4PO2]

```
int main()
{
        char *p="alok";
        int i;
        for(i=0; *(p+i)!='\0'; i++)
                printf("%c",*(p+i));
        return 0;
}
```

PART-C (4 X 15=60 Marks)

3a (i) Write a program to display weekday as per the digit given within(1 to 7), i.e: 1 − Sunday, 2- Monday, 3-Tuesday etc. Use switch..case   [7][CO1/PO2]

(ii)Write a program to create a structure for product having members like product code, product name, price and quantity. Create a structure pointer to allocate memory for five products using dynamic memory allocation. Store the product details and display.   [8][CO1/PO3]

(or)

b. (i)Write a program to input a positive number and test whether it is Armstrong number or not.   [5][CO1/PO2]

(ii) Write down the difference between the followings with suitable example for each : (i)while vs. do..while   [10][CO1/PO2]
    (ii)call by value vs call by address

4a (i)Write a program to input values into a 4X4 matrix and display the transpose of it. [7] [CO2/PO3]

(ii)Write a program to input 4 unequal numbers and find the greatest using else if [8][CO2/PO3]
ladder using UDF.

(or)

b (i)   Write a program to print the pyramid [7][CO2/PO2]
* * * * * * * * *
* * * * * * *
* * * * *
* * *
*

(ii) Write the syntax and explain on string handling functions: strcmp(), strrev(), [8][CO2/PO2]
strcpy(),strcat() using a suitable example

5a (i) Write a program to input 10 integers into an array. Create a recursive function to [7][CO2/PO3]
find the largest element present.

(ii)Write a program to create a structure for product having members like product [8][CO3/PO2]
code, product name, price and quantity. Create a structure pointer to allocate
memory for five products using dynamic memory allocation. Store the product
details and display.

b.   **(or)**

(i) Write a program to create user defined function called swap having two integer [7][CO3/PO3]
pointers as its arguments and it has no return value. Call this function for
interchanging two values using call-by-address.

(ii)Briefly explain all the storage classes and their characteristics. [8][CO3/PO3]

6a (i) Write a program to create a structure BOOKS having members : Book code, book [7][CO4/PO3]
name, author, cost. Store 10 books details using structure array. Find the total cost of
all books and the costly book exist.

(ii)What is the advantage of a character pointer over a character array? Explain the [8][CO4/PO3]
terms: array of pointers, pointe to pointer.

b.

(or)

(i)Write briefly about implicit and explicit type conversions with suitable example. [7][CO4/PO3]

ii)Write a program to input 3 co-efficient values and find the real roots of a quadratic [8][CO4/PO2]
equation.

==0==