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Total Number of Pages : 3

B.TECH. DEGREE EXAMINATION-Nov-Dec.2018
End Semester Examination-I Semester

BBSSES1050- Programming for Problem Solving
(Regulations 2018)(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. In C language, which library function checks whether the input value of the argument is an alphabet or not. [CO1/PO2]
Options: (a)alpha() (b)isalpha() (c)alphabet() (d)chkalpha()
- b. Find the output of below statement in the given options: [CO1/PO2]
printf("santosh\b\b\ilata\nare you?");
Options: a) Santosh ilata are you? b) santilata are you?
c) Santosh ilata are you" d) santilata are you"
- c. Examine the following: [CO2/PO1]
double[][] values =
{ {1.2, 9.0, 3.2},
{9.2, 0.5, 1.5, -1.2},
{7.3, 7.9, 4.8} } ;
what is in values[2][1] ?
options: (a)7.3 (b)7.9 (c) 9.2 (d)There is no such array element
- d. What is the default return type of a user defined function. [CO3/PO1]
Options: a) int b) char c) float d) double
- e. Where will the space be allocated for an automatic storage class variable? [CO3/PO2]
Options: a) In CPU register b) In memory as well as in CPU register
c) In memory d) On disk
- f. The maximum value a variable can hold depends upon its storage class.II) By default all variables enjoy a static storage class. [CO3/PO2]
options: a) Only I is correct b) Only II is correct
c) Both I & II are correct d) Both I & II are incorrect
- g. In C, if you pass an array as an argument to a function, what actually gets passed? [CO2/PO1]
Options: a)Value of elements in array (b)First element of the array
(c)Base address of the array (d)Address of the last element of array
- h. What is the output of the following: [CO4/PO1]
main()
{
char *a="Hello";
char *p="World";
strcpy(a,p);
printf("%s",a);
}
Options: a) Hello b) HelloWorld c) World d) None of these



- i. calloc() belongs to which library [CO4/PO1]
options: (a)stdlib.h (b) malloc.h (c)calloc.h (d)None of above
- j. typedef declaration: [CO4/PO1]
options: (a)Does not create a new type
(b)It merely adds a new name for some existing type.
(c)Both a & b (d)None of the mentioned

PART-B (10 X 2=20 Marks)

2. (a)What is type casting. Write with a suitable example. [CO1/PO2]
- (b) Find the output when we execute the below statements: [CO1/PO2]
int x,y,z,a;
x=30;y=20;z=10;
a=x>y>z;
printf(“%d”,a); [CO1/PO3]
- (c) What will be the output and why?
#include<stdio.h>
void main()
{ int x,y; x=10; y=10;
if(x/x%x) printf(“It is summer”);
else printf(“it is rainy”);
}
- (d)Write down the syntax and example of for statement. [CO2/PO2]
- (e)What will be the output and why? [CO2/PO2]
main()
{ printf(“%c”, “abcdef”[4]); }
- (f)What is the difference between Strings and Arrays? [CO3/PO2]
- (g)Find output: [CO3/PO1]
main()
{ static int a=1;
printf(“%d”,a++);
if(a<=4)
main();
}
- (h)Write an example on nested structure. [CO4/PO1]
- (i)What is a self-referential structure? [CO4/PO1]
- (j) Find Output: [CO4/PO3]
main()
{ char *ptr;
ptr=“GUNUPUR”;
printf(“%c”,*(&(*ptr)));
}

PART-C (4 X 15=60 Marks)

- 3a. i. Write down the syntax of else if ladder and switch..case and then state the difference between them. Write a program to find greatest among 3 numbers using switch..case [CO1/PO2]



- ii. What is an algorithm and flowchart? Draw the flowchart and write algorithm for accepting a number and check whether it is prime or not. [CO1/PO3]

(or)

- b. i. Write a program to accept arithmetic operator and two operands. Find the result as per the operator symbol entered using else if ladder. [7][CO1/PO2]
ii. 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 [8][CO1/PO2]

- 4.a. i. Write a program to accept a string in to a character array and sort it's alphabets in ascending order. [8][CO2/PO3]
ii. Write a program generate pyramid given below: [7][CO2/PO3]

```
    1
   1 2 3
  1 2 3 4 5
 1 2 3 4 5 6 7
```

(or)

- b. i. Write down the difference between Entry Controlled vs. Exit Control loop with suitable example. Write a program to print Alphabets from 'A' to 'Z' using while. [7][CO2/PO2]
ii. Write a program to input a positive integer and its equivalent binary number using loop. [8][CO2/PO2]
- 5.a. i. Write a C program which contains three UDF's namely add(), subtract() and multiply(). Each function accepts two integers as their arguments and calculate and return the results [7][CO2/PO3]
ii. Write a program to input values into two 4X4 matrices. Create an UDF which accepts the two matrices and perform matrix addition. [8][CO3/PO2]

(or)

- b. i. Write a program to find GCD of two integers using a recursive function. [7][CO3/PO3]
ii. Briefly explain all the storage classes and their characteristics. State the difference between auto and static with an example. [8][CO3/PO3]
- 6a. i. Write a program to create user defined function called swap having two integer pointers as its arguments and it has no return value. Call this function for interchanging two values using call-by-address. [7][CO4/PO3]
ii. Write a program to create a structure BOOKS having members : Book code, book name, author, cost. Store 10 books details using structure array. Find the total cost of all books. [8][CO4/PO3]

(or)

- b. i. Write a program to input 10 integers into an array. Create an UDF which accepts the base address of array and finds the sum of even numbers and sum of odd numbers separately. [7][CO4/PO3]
ii. Write a program to create a structure called SUBJECTS having members: roll no, physics, chemistry, maths, total marks. Create a structure array to store 10 students marks. Calculate the total marks of each student. [8][CO4/PO3]