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Total Number of Pages : 2

AR-18

B.TECH

1<sup>st</sup> Semester (BACK PAPER) Examination-Nov/Dec 2019**BBSSES1050 PROGRAMMIN FOR PROBLEM SOLVING**

Time : 3 Hours

Maximum : 100 Marks

Answer ALL Questions

The figures in the right hand margin indicate marks.

**PART – A: (Multiple Choice Questions) 10 x 2=20 Mark****Q.1. Answer ALL Questions**

- a The format specifier for long int and float are:  
a) %ld and %f b) %long and %f c) %i and %f d) None of these
- b Find the output for below Given code:  
int x=20, y=30, z;  
z=(x<y)+10;  
printf(“%d”, z);  
options:  
a) 10 b) 1 c) 11 d) error
- c Given: printf(“abhi\bla\b\byash”);  
The output is:  
a) Abhilayash b) abhlayash c) abhyash d) abhi\bla\b\byash
- d The keyword used to transfer control from a function back to the calling function is:  
a) Return b) exit() c) break d) continue
- e A set of consecutive memory locations having homogeneous elements is called:  
a) Structure b) Array c) Pointer d) Function
- f Complexity of linear search algorithm is:  
a) O(N) b) O(log N) c) O(N<sup>2</sup>) d) O(N log N)
- g what is prototype of a function in C  
a) It is the return type of a function b) It is the return data of the function  
c) It is declaration of a function d) It is a data type
- h Any type of modification on the parameter inside the function will reflect in actual variable value can be related to:  
a) call by value b) call by reference c) both of above d) none of above
- i Structures can be used  
a) to hold different data types b) have pointers to structures  
c) to assign to one another d) all of above
- j Difference between structure and union is:  
a) We can define functions within structures but not within a union  
b) We can define functions within union but not within a structure  
c) The way memory is allocated  
d) There is no difference

**PART – B: (Short Answer Questions) 10X2=20 Marks****Q.2. Answer ALL questions**

- a Write down the syntax and example on statements: printf, scanf
- b How does bitwise operator XOR works?
- c Find the output when we execute the below statements:  
int x, y, z, a;  
x=30; y=20; z=10;  
a=x>y>z;  
printf(“%d”, a);
- d What is an infinite loop?
- e What is continue statement and why we use it ?



- f What will be the output and why?  
main()  
{ printf(“%c”, “abcdef”[4]); }
- g Explain about the characteristics of storage classes: static, register.
- h What is the difference between strcmp() and stricmp() functions?
- i What is a NULL pointer?
- j When to use -> (arrow) operator.

**PART – C: (Long Answer Questions) 4X15=60 Marks**

**Answer ALL questions**

- Q.3**
- a Write down the syntax of else if ladder and switch..case and then state the difference between them. 7  
Write a program to find greatest among 3 numbers using switch..case
- b What is an algorithm and flowchart? Draw the flowchart and write algorithm for accepting a number and check whether it is prime or not. 8
- OR
- c Explain briefly about the basic structure of a c program. 7
- d Write a program to accept arithmetic operator and two operands. Find the result as per the operator symbol entered using else if ladder. 8
- Q.4**
- a Write a program to accept 10 numbers in to an array and sort it using insertion sort in ascending order. 7
- b Write a program to check how many prime numbers and perfect numbers exist within 1 to 100. 8
- OR
- c Write down the difference between Entry Controlled vs. Exit Control loop with suitable example. 7  
Write a program to print Alphabets from ‘A’ to ‘Z’ using while.
- d Write a program to input elements into 4 × 4 matrix and find the principal diagonal 8
- Q.5**
- a Write a program to input two numbers and find the GCD of them using a recursive function. 7
- b Write a program to generate Fibonacci series of N numbers using a recursive function. 8
- OR
- c Write a program to find GCD of two integers using a recursive function. 7
- d Briefly explain all the storage classes and their characteristics. State the difference between auto and static with an example. 8
- Q.6**
- 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
- b 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. 8
- OR
- c Write a program to create a structure for employee code, name and salary. Store five employee details using structure array and display only employee names whose salary is greater than 25000 . 7
- d 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 using call-by-address. 8
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