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|  | **Midterm Exam, Summer 2014**  Department of Computer Science and Engineering  State University of Bangladesh | | | | |  |
|  | **CSE -103 Structured Programming Language** | | | | |  |
|  | *Time: 1hr 30min* | |  |  | *Full Marks: 30* |  |
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|  | *(Answer any* ***03*** *questions)* | | | | |  |
| **1.** | **a)** | Briefly discuss about the desirable characteristics that a typical computer program should have. | | | | **3** |
|  | **b)** | Write a C program that will take 2 integer numbers as input and will display the larger number as output. | | | | **4** |
|  | **c)** | Mention the typical memory size of each primary data type used in C. Give an example of declaring a symbolic constant and an unsigned integer variable. | | | | **3** |
|  |  |  | | | |  |
| **2.** | **a)** | Draw the Flow-chart of the program mentioned in question 1(b). | | | | **3** |
|  | **b)** | Mention 3 unary and 3 logical operators’ name with symbol. What will be the output of the following C code?  **…**  **int x=30, y=39;**  **y=x++;**  **printf (“X=%d and Y=%d \n”, x, y);**  **y=--x;**  **printf (“X=%d and Y=%d \n”, x, y);**  **…** | | | | **4** |
|  | **c)** | Suppose we have a code segment:  **scanf(“ %3d %5d %2d”, &x, &y, &z);**  If we give the following data as input in console port, what will be the value of **x,y,z**?  **987765 3210123 99** | | | | **3** |
|  |  |  | | | |  |
| **3.** | **a)** | Write the syntax of all branching and iterative control statements used in C. | | | | **3** |
|  | **b)** | Write the syntax (with parameters) and purposes of the following library functions:  i) **puts()**, ii) **strcpy()**, iii) **atof()**, iv) **ceil()** | | | | **4** |
|  | **c)** | What are the differences among getche(), getch() and getchar() functions? Write the syntax of scanf() and printf() function. | | | | **3** |
|  |  |  | | | |  |
| **4.** | **a)** | Rewrite the following code with correct syntax:  **#include <studio.h>;**  **void avg(int A; int B);**  **{ return (a+b)/2.0}**    **int main()**  **{ int x , int y , double average;**  **scanf (“%f %f”, x, y);**  **average=avg(x,y)**  **Printf{“ average is %f” , average};**  **return 0.0}** | | | | **5** |
|  | **b)** | Write the syntax of a function definition in C. What is dummy parameter? Why it is called so? | | | | **3** |
|  | **c)** | What are the purposes of **return** statement in C? What is a recursive function? | | | | **2** |