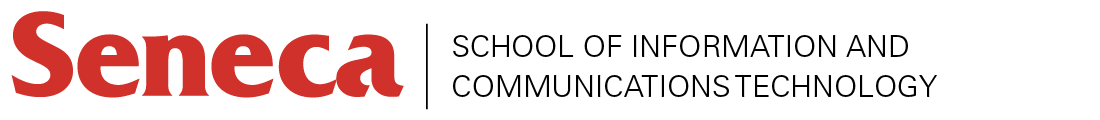
**MIDTERM TEST **

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| TERM | COURSE NAME | COURSE CODE | VERSION |
| Summer  2018 | Introduction to Programming Using C | IPC144 | 1 |

|  |  |
| --- | --- |
| Name |  |
| Student Number |  |
| Seneca Email ID |  |
| Section | S\_\_­­­\_ |

DATE: Jone, 19th 2018

TIME ALLOWED: 50 mins

NUMBER OF QUESTIONS: 13

TOTAL MARKS 36

PROFESSOR: Fardad Soleimanloo

**SPECIAL INSTRUCTIONS:**

1. A reference sheet is permitted and must be submitted with the exam, 1 – 8 ½ X 11, white, 2 sided, printed from a computer-generated document, name and student id on both sides
2. Write your answers in the spaces provided
3. You are not permitted to use your cell phone

This test includes a *cover page*, plus 5 pages of *questions*.

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| --- |
| SENECA’S ACADEMIC HONESTY POLICY |
| As a Seneca student, you must conduct yourself in an honest and trustworthy manner in all aspects of your academic career. A dishonest attempt to obtain an academic advantage is considered an offense, and will not be tolerated by the College. |

**Part A (10 marks),** **Please answer the word questions with maximum of 3 sentences.**

1. Name three integral types. [3 marks]
2. What does “const” do? [2 marks]
3. What does the printf print? [2 marks]

**int a = 3;**

**int b = 4;**

**int c = 5;**

**int x = a+b \* c;**

**double d = c / 2;**

**printf("%d %.2lf", x, d);**

1. What does the printf print? [1 mark]

**double v = 123.567;**

**printf("%.2lf", v);**

1. What is the calculated value of (17 % 5)? [1 mark]
2. What is the value of “x” after this code is executed: [1 mark]

int x;

int a = 10, b = 20;

x = a < b;

1. If a code compiles, can we be sure that is runs correctly? Explain. [2 marks]
2. What does the “&” beside the variable name in Scanf mean? Explain: [2 marks]
3. Write this while loop in for loop format: [4 marks]

// ABCDEFGHIJKLMNOPQRSTUVWXYZ

**int i;**

**char ch = 'e';**

**i = 1;**

**while (i < 5) {**

**printf("%c", ch + i);**

**i++;**

**}**

1. What is the exact output of question number 9: [2 marks]
2. The following program is to find the average of several double values. Please correct the six mistakes so it can compile successfully and also run correctly as follows:   
   [6 marks]

**Number of values: 3**

**1> 2.34**

**2> 3.45**

**3> 4.56**

**average is 3.4**

#define \_CRT\_SECURE\_NO\_WARNINGS

#include “stdio.h”

int main(void) {

int num;

int i = 0;

double val, sum;

printf("Number of values: ");

scanf("%d", num);

while (i < num) {

printf("%d> ", i);

scanf("%d", &val);

sum += val;

}

printf("average is %lf", sum / num);

return 0;

}

12- Determine the exact output of the following program: [4 marks]

// ABCDEFGHIJKLMNOPQRSTUVWXYZ

int main(void) {

int i;

char ch = 'M';

for (i = 0; i <= 3; i++) {

switch (i) {

case 2:

ch = 'C';

break;

case 3:

ch = 'J';

case 1:

ch-=5;

break;

default:

ch++;

}

printf("%c", ch);

}

printf("\n");  
 return 0;

}

1. Write the following function. This function returns the smallest of 3 integer numbers received from the argument list. [6 marks]

Prototype:   
int min(int FirstNumber, int SecondNumber, int ThirdNumber);

Function code: