Midterm Exam

Due Oct 13 at 12:25pm

Points 100

Questions 33

Available Oct 13 at 11am - Oct 13 at 12:27pm about 1 hour

Time Limit 85 Minutes

Instructions

Please answer the following questions.

This exam is open book and open paper (not electronic) notes.

By taking this exam, I pledge that during the course of the exam I will not communicate with anyone other than the course staff. I will not visit any website other than the site of the exam itself, nor will I use any external tools except for the last 3 coding problems (e.g., IDEs or compilers) during the exam period. My browser will be set to full-screen for the entire period of the exam with the only browser tab open to the exam, unless I am actively communicating with course staff.

I certify that the answers submitted are solely my work.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	79 minutes	40 out of 100 *

^{*} Some questions not yet graded

Score for this quiz: 40 out of 100 *

Submitted Oct 13 at 12:19pm This attempt took 79 minutes.

Question 1	1 / 1 pts
The CPU is	
responsible for executing instructions and processing data	
the brain of a computer	
neither of these	

both of these

	Question 2	1 / 1 pts
	An operating system	
	is not required to run a computer	
	onone of these	
Correct!	is a collection of utilities that control a computer	
	O loads from the CPU when booting a computer	

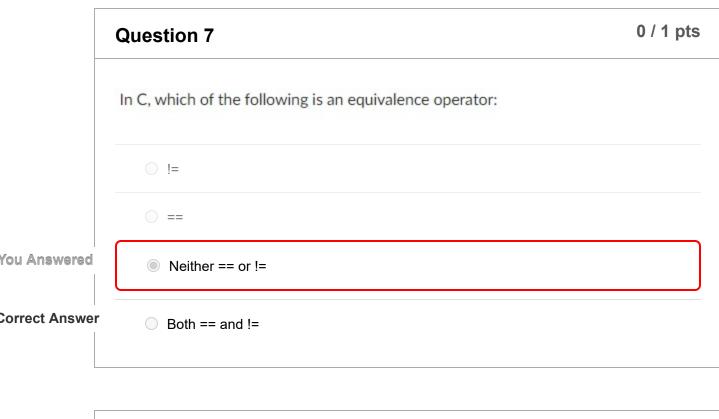
	Question 3	0 / 1 pts
	An int has:	
ou Answered	8 bits	
	O 16 bits	
	O 64 bits	
orrect Answei	r 32 bits	

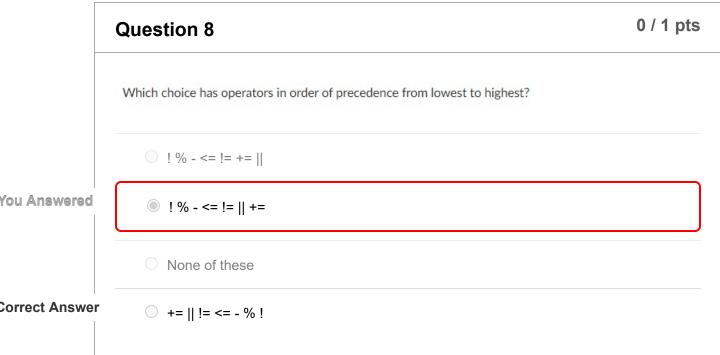
1 / 1 pts

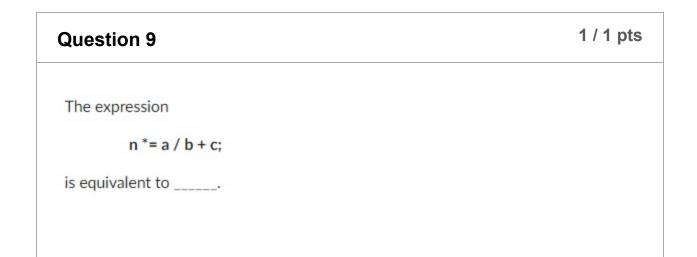
Correct! A blank space < '0' in ASCII 'e' < '0' in ASCII 'F' < '1' is true in ASCII Question 5 1/1 pts

	Question 5	1 / 1 pts
	A gigabyte (the x^y means x to the y power)	
	is 2^10 bytes	
Correct!	is 2^30 bytes	
	is 2^40 bytes	
	is 2^20 bytes	

	Question 6	0 / 1 pts
	The code that declares a named constant MAX is:	
	onst double MAX = 100;	
ou Answered	#define Max 100	
orrect Answer	Both of these	
	None of these	







	O n = n * a / b + c;
Correct!	none of these
	○ n = n * a / (b + c);

Question 10	1 / 1 pts
Which library contains the scanf function?	
stdio.h	
input.h	
studio.h	
stdlib.h	

	Question 11	1 / 1 pts
	Local variables	
	are defined above main	
Correct!	are defined inside a function body	
	are defined immediately before a function definition	
	cannot be defined	

	Question 12	1 / 1 pts
	In z = func(1, 2, 3); , 1 is a:	
	onone of these	
	output argument	
	O parameter	
Correct!	actual argument	
	Question 13	1 / 1 pts
	Which of the following expressions represents:	
	n is either equal to 12 or not greater than 6	
	○ n == 12 !n > 6	
	n = 12 !(n > 6)	
	n = 12 !n > 6	
Correct!		
	Question 14	1 / 1 pts
	Which of the following is a control structure?	
	 sequential structure 	
Correct!	all of these	

	iteration structure	
	 selection structure 	
L		
	Question 15	0 / 1 pts
	Which structure executes an action if one of a number of conditions is true and performs a different action if all of the conditions is false.	
	if	
	switch	
ect Answer	ifelse ifelse	
Answered	ifelse	
L		
_	Question 16	1 / 1 pts
	Which of these is a multiple-selection structure.	
	onone of these	
) 		
correct!	ifelse ifelse	
orrect!	ifelse ifelseifelse	
orrecti		
orrecti	ifelse	

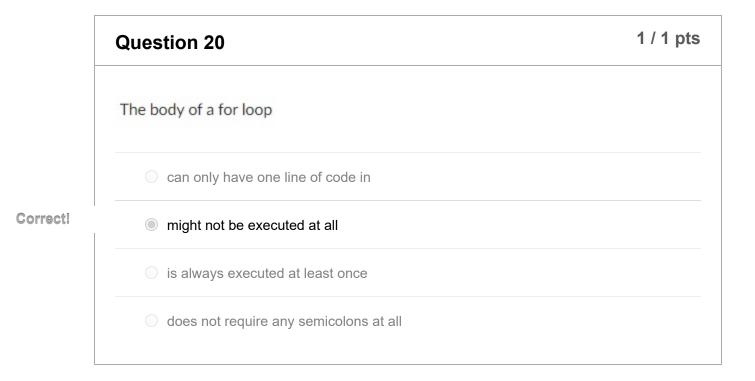
	This loop is for(int i=0; i<10; i+1);	
	okay	
	a syntax error	
You Answered	none of these	
Correct Answer	an infinite loop	
	Ougstion 49	1 / 1 nts

Question 18	1 / 1 pts
How many times will this loop execute: for(i=1; i <n; i++);<="" th=""><th></th></n;>	
O 0	
\bigcirc n	
O n+1	
n-1	

	Question 19	1 / 1 pts
	A loop stops executing when a special input value is entered.	
	flag-controlled	
Correct!	sentinel-controlled	
	standard	

end-file

Correct!



```
2 / 2 pts
                 Question 21
                   What value is assigned to q in the statement
                   q = func(1, 2, 3, 4);
                   if func is defined as follows?
                   int func(int a, int b, int c, int d) {
                     int p = a * b + 2 / (c - d);
                     return p;
                   }
                      0
Correct Answers
                     0
```

2 / 2 pts **Question 22**

```
What is printed by the following code?
                  int main(){
                     int a=4, b=3, c=2, d=1;
                     func(a, b, c, d);
                  }
                 void func(int a, int b, int c, int d){
                     a--;
                     b %= 2;
                     c *= 10;
                     d += 5;
                     printf("%d %d %d %d", a, b, c, d);
                     return;
                  }
                       3 1 20 6
Correct Answers
                     3 1 20 6
```

```
4 / 4 pts
Question 23
 What is printed by the following code?
 int main(){
    int a=4, b=3, c=2, d=1;
    func(a, b, c, d);
 }
} void func(int a, int b, int c, int d){
    if(a > b && c > d)
      printf("True");
      printf("False");
    return;
 }
    True
    False
```

Question 24 4 / 4 pts

```
What is printed by the following code?
int main(){
   int a=4, b=3, c=2, d=1;
   func(a, b, c, d);
}

void func(int a, int b, int c, int d){
   if(a < b || c > d && a <= d)
      printf("True");
   else
      printf("False");
   return;
}</pre>
```

True

Correct!

False

Question 25 0 / 4 pts

```
What is printed by the following code?
                  int main(){
                     int a=1, b=2, c=3, d=4;
                    func(a, b, c, d);
                  }
                  void func(int a, int b, int c, int d){
                     if(a > b || c < d && a >= d)
                }
                       printf("One");
                     else if(a < b && c < d || a >= d)
                       printf("Two");
                     else if(a > b && c < d && a >= d)
                       printf("Three");
                     else
                       printf("Zero");
                     return;
                  }
                     Zero
Correct Answer
                     O Two
                     One
                     Three
```

0 / 4 pts **Question 26**

You Answered

```
What is printed by the following code?
                   int main(){
                     int a=1, b=2, c=3, d=4;
                     func(a, b, c, d);
                   }
                   void func(int a, int b, int c, int d){
                     switch(c){
                       case 1:
                          printf("Red ");
                       case 2:
                          printf("Green ")
                }
                          break;
                       case 3:
                          printf("Blue ");
                       case 4:
                          printf("Cyan ");
                          break;
                       default:
                          printf("None");
                     }
                     return;
You Answered
                       Blue None
                     Blue Cyan
```

Correct Answers

4 / 4 pts **Question 27**

What value is returned from the following function to x if the function call is: int main(){ int a=1, b=2, c=3, d=4; int x = func(a, b, c, d); } int func(int a, int b, int c, int d){ int n = 25; for(int i=c; i<10; i+=2){ n += i; return n; Correct! 49 **Correct Answers** 49 4 / 4 pts **Question 28** How many lines does this loop print? for (int i = 10; i < 60; i += 2) printf("%d\n", i);

Correct Answers 25

```
How many lines of output will be displayed by the following program fragment? (NOTE: The inner loop initialization depends on the outer loop.)

for (int i = 2; i < 5; i+=1)
for (int j = 0; j < i; j+=2)
printf("%d %d\n", i, j);
```

Question 30

0 / 6 pts

for(int i=3; i<4; i+=1) for(int j=2; j<4; j+=1) { if(i == j)

What is printed by the following?

for(int j=2; j<4; j+=1) {
 if(i == j)
 printf("|%d == %d|", i, j);
 else
 printf("|%d != %d|", i, j);
}

You Answered

```
|3 != 2| |3 == 3|
```

Correct Answers

Question 31

Not yet graded / 10 pts

**** The next three problems are coding problems. I suggest that you copy and paste the problems into your IDE and comment them. This will keep you from switching between your IDE and browser. It should save you time.

Write an empty main function.

Write a function called min() that accepts 3 doubles and returns the minimum value of the three.

Add code to your main function to test your code. Use all permutations of 1, 2, and 3(1,2,3)(1,3,2)(2,1,3)(2,3,1)(3,1,2)(3,2,1). The output below proves that min() finds the min of the three for all of the required test data.

Output

min = 1.00

min = 1.00

min = 1.00

```
min = 1.00
min = 1.00
min = 1.00
Copy your code and paste it below.
Your Answer:
#include <stdio.h>
void min(int num1, int num2, int num3);
int main() {
int num1, num2, num3;
printf("Input 3 numbers: ");
scanf("%d %d %d", &num1, &num2, &num3);
min(num1, num2, num3);
return 0;
void min(int num1, int num2, int num3) {
if (num1 < num2 && num1 < num3) {
printf("min = %d", num1);
else if(num2 < num3) {
printf("min = %d", num2);
else {
printf("min = %d", num3);
}
}
```

Question 32

Not yet graded / 10 pts

Write an empty main function.

Write a function called print_odd_7_no_5() that accepts integers m and n, and prints all ints from m to n that are odd, divisible by 7 and not divisible by 5.

Hint: Use a for loop to iterate from m to n inclusive (test it) and add code to only print odd, divisible by 7 and not divisible by 5 (test again).

Add code to your main function to test your code from 1 to 200.

Output

7 21 49 63 77 91 119 133 147 161 189

Copy tour code and paste it below.

```
Your Answer:
#include <stdio.h>
int print_odd_7_no_5(int m, int n);
int main() {
int m, n;
printf("Input M: ");
scanf("%d", &m);
printf("Input N: ");
scanf("%d", &n);
print_odd_7_no_5(m,n);
return 0;
}
int print odd 7 no 5(int m, int n) {
for (int m=1; m < n; m++) {
if((m%2==0) || (m%7==0) || (m%5==0)) {
printf("%d %d\n", m, n);
}
}
}
```

Question 33

Not yet graded / 20 pts

Write an empty main function.

Write a function called rdiag() that accepts an integer n and prints an n by n square of 0s and 1s as shown below. Notice that only the reverse diagonal has 1s.

Hint: Write a nested loop to print n rows and n columns of zeros (test it) add code to print the selected pattern (test again). Add code to your main function to test your code. Output 000000001 000000010 000000100 0000001000 0000010000 0000100000 0001000000 0010000000 0100000000 100000000 Copy and paste your code below. Your Answer: #include <stdio.h> int rdiag(int n); int main() { int n; printf("What is n?: "); scanf("%d", &n); rdiag(n); return 0; } int rdiag(int n) { for (int i=1; $i \le n$; i++) { printf("%d\n", n); } }

Quiz Score: 40 out of 100