

Review Test Submission: Final Exam

User	--
Course	201-ICS-104 (Intro. to Prog. in Python & C) [COMMON: ALL ICS-104 students]
Test	Final Exam
Started	12/24/20 8:00 AM
Submitted	12/24/20 9:26 AM
Status	Completed
Attempt Score	105 out of 105 points
Time Elapsed	1 hour, 25 minutes out of 1 hour and 40 minutes
Results Displayed	Submitted Answers, Correct Answers

Question 1 2.5 out of 2.5 points

Given a string **'Ali horses'** in Python, we want to add a verb to make a sentence such as **'Ali likes horses'**. Suppose we have a string-variable name as defined below (**names** has one space between the two words - **Ali** and **horses**), and we want to insert a string **'likes'** in this space, which of the following solutions is the correct answer.


```
names = 'Ali horses'
```

Selected Answer: `sentence = names[:4] + 'likes' + names[3:]`

Correct Answer: `sentence = names[:4] + 'likes' + names[3:]`

Question 2 2.5 out of 2.5 points

Given the python statement `y = 5**3**2//2 + 5`, which of the following is an equivalent C statement that results in the same value for y? You can assume that y is of the same data type in both statements. Note that the C function `pow(base,exponent)` returns the double value $base^{exponent}$ (base to the power exponent)

Selected Answer:  `y = (int)pow(3,2)*5/2 + 5;`

Correct Answer: `y = (int)pow(3,2)*5/2 + 5;`

Question 3 2.5 out of 2.5 points

```
for x in range(5):
    print("x + x = 2 * x")
print("x / 2 = 0.5 * x")
```

Which of the following C codes produce result(s) similar to the above Python code

Selected Answer:

```
for (x = 0;
    x < 5;
    x++) printf("x + x = 2 * x\n");
printf("x / 2 = 0.5 * x\n");
```

Correct Answer:

```
for (x = 0;
    x < 5;
    x++) printf("x + x = 2 * x\n");
printf("x / 2 = 0.5 * x\n");
```

Question 4 2.5 out of 2.5 points

Which of the following Python commands will delete an existing file **tempFile.txt** and create a new one with the same name?

Selected Answer: ☒ `infile = open("tempFile.txt", "w")`

Correct Answer: `infile = open("tempFile.txt", "w")`

Question 5 2.5 out of 2.5 points

What is the value of **result** after the following code fragment is executed?

```
n = 4
result = 1 + 2 * n
print(result)
```

Selected Answer: 9

Correct Answer: 9

Question 6 2.5 out of 2.5 points

What will be the result of executing the following C code?

```
1 #include<stdio.h>
2 int main(void)
3 {
4     int x = 3, y = 7, *p1, *p2;
5
6     p1 = &x;
7     *p1 += 4;
8     p2 = &y;
```

```

8   p2 = ay,
9
10  if(p1 == p2)
11      printf("104 ");
12  if(*p1 == *p2)
13      printf("ICS ");
14  p1 = p2;
15  *p2 = -3;
16  printf("%d %d", *p1, y);
17
18  return 0;
19  }

```

Selected Answer: ☒ ICS -3 -3

Correct Answer: ☒ ICS -3 -3

Question 7

2.5 out of 2.5 points

Consider the following C code:

```

#include <stdio.h>

int myFun (int value);
int hisFun (int value);
int herFun (int value);

int main() {
    int i, j = 4;
    int herFun = 3;
    i = myFun(j);
    printf("The values of i and j are %d and %d\n", i, j);

    return 0;
}

int myFun (int value) {
    int myVar;
    myVar = value + value;
    return myVar;
}

int hisFun(int value) {
    int myFun = 8;
    return (myFun + value);
}

int herFun(int value) {
    int hisFun = 4;
    return (hisFun - value);
}

```

The function herFun is visible in

Selected Answer: ☒ myFun, hisFun and herFun only.

Correct Answer: ☒ myFun, hisFun and herFun only.

Question 8

2.5 out of 2.5 points

Which of the following statements is WRONG

Selected Answer: ☒ Different Objects of the same class have different behaviors

Correct Answer: ☒ Different Objects of the same class have different behaviors

Question 9

2.5 out of 2.5 points

Which of the following statements is correct for this Python code, when the user enters his name ("Ahmad") instead of his age.

```
In [*]: age = int(input("Enter your age: "))
```

Enter your age:

Selected Answer: ☒ A ValueError exception will be raised.

Correct Answer: ☒ A ValueError exception will be raised.

Question 10

2.5 out of 2.5 points

What is the output of the following Python code fragment?

```

set1 = {1, 2, 3}
set1.add(4)
set1.add(4)
set1.discard(1)

print(set1)

```

Selected Answer: ☒ {2, 3, 4}

Correct Answer: ☒ {2, 3, 4}

Question 11

2.5 out of 2.5 points

What is the correct order of evaluating the operators in the following expression: (The order is from left to right)

not a > b or (b < c and c != 1)

Selected Answer: <, !=, and, >, not, or

Correct Answer: <, !=, and, >, not, or

Question 12

2.5 out of 2.5 points

What is the output of the following Python code fragment?

```
class Person:
    def __init__(self, name, id):
        self.name = name
        self.id = id * 2

p1 = Person("Omar", 100)
print(p1.id)
```

Selected Answer: 200

Correct Answer: 200

Question 13

2.5 out of 2.5 points

What is the output of the following Python code:

```
i = 2
x = 2
for i in range(6):
    print(i, end = ' ')
    x += 1
print(x, end = ' ')
```

Selected Answer: 0 1 2 3 4 5 8

Correct Answer: 0 1 2 3 4 5 8

Question 14

2.5 out of 2.5 points

What is the output of the following code given that the user entered 111 then 222?

```
x = input('Enter a number') # Assume 111 is entered
y = input('Enter another number') # Assume 222 is entered
z = int(x)
w = float(y)
s1 = z + w
s2 = x + y
print(s1, end = ' ')
print(s2)
```

Selected Answer: 333.0 111222

Correct Answer: 333.0 111222

Question 15

2.5 out of 2.5 points

```
def MyFunction(a,b,c):
    c = a + b
    return c
```

```
x = 1; y = 2; z = 0
print(MyFunction(x,y,z))
```

Which of the following C codes produce result(s) similar to the above Python code

```
#include <stdio.h>
void fun1(int *x, int *y, int *z){*z = *x + *y;}
void fun2(int x, int y, int z){z = x + y;}
int fun3(int x, int y, int z){
    z = x + y;
    return z;}
int fun4(int x, int y, int z){
    printf("%d\n",x+y);
    return z;}

void main(void){
    int i = 1, j = 2, k = 0;
    // //////////////////////////////////
    // Your choice goes here //
    // //////////////////////////////////
}
```

Selected Answer: None of the given answers is correct

Correct Answer: None of the given answers is correct

Question 16

2.5 out of 2.5 points

What is the output of the following Python code:

```
a = 2.2
```

```
b = 3.6
```

```
print("The result of %.0f + %.1f = %.2f" % (a,b,a+b))
```

Selected Answer:

✓ The result of 2 + 3.6 = 5.80

Correct Answer:

✓ The result of 2 + 3.6 = 5.80

Question 17

2.5 out of 2.5 points

What will be the result of executing the following Python code?

```
myNumbers = [3.0, 2.0, 1.0]
hisNumbers = myNumbers[1] + (myNumbers[2] * 2)
print(hisNumbers)
```

Selected Answer: ✓ 4.0

Correct Answer: ✓ 4.0

Question 18

2.5 out of 2.5 points

What will be the result of executing the following C code?

```
1 #include<stdio.h>
2
3 int main(void)
4 {
5     char Z = 'S';char X = 'I';char *v;
6
7     v = &X;printf("%c", *v);
8     v = &Z;printf("%c", *v);
9     *v = 'C';printf("%c", Z);
10
11     return 0;
12 }
```

Selected Answer: ✓ ISC

Correct Answer: ✓ ISC

Question 19

2.5 out of 2.5 points

Which of the following statements is true

Selected Answer: ✓ Programs with global variables are difficult to maintain and extend.

Correct Answer: ✓ Programs with global variables are difficult to maintain and extend.

Question 20

2.5 out of 2.5 points

Consider the following C code fragment:

```
#include <stdio.h>

int main() {
    int i=2, j = 7;
    double k = 1.5, m = 0.5;
    double result;
    result = j / i + k - m;
    printf("result = %.1f\n", result);

    return 0;
}
```

The output of running the above code is:

Selected Answer: ✓ result = 4.0

Correct Answer: ✓ result = 4.0

Question 21

2.5 out of 2.5 points

Given the following Python code fragment:

```
if x==0 or y==0:
    z=0
else:
    z=x/y
```

which of the following is an equivalent valid C code that produces the same result as the above code fragment? You can assume that x, y, and z are of type float.

Selected Answer:

```
if (x==0 || y==0) {
    z=0;
}
else {
    z=x/y;
}
```

✓

Correct Answer:

```
if (x==0 || y==0) {
    z=0;
}
```

```
    }  
    else {  
        z=x/y;  
    }  
}
```

✔

Question 22

2.5 out of 2.5 points

What will be the result of executing the following Python code:

```
aList = ["ICS 104 is EASY!", [4, 8, 12, 16]]  
print(aList[1][3])  
print(aList[0][2])
```

Selected Answer: 16
✔ S

Correct Answer: 16
✔ S

Question 23

2.5 out of 2.5 points

What is the output of the below C code?

```
#include <stdio.h>  
  
void test1(int m, int n);  
  
void test3(int a, int *b);  
  
int main(void) {  
    int a=10, b=16;  
  
    test1(a,b);  
    printf("a=%d, b=%d, ",a,b);  
  
    test3(a,&b);  
    printf("a=%d, b=%d\n",a,b);  
  
    return 0;  
}  
void test1(int m, int n) {  
    m=5;  
    n=24;  
}  
  
void test3(int a, int *b) {  
    a=38;  
    *b=57;  
}
```

Selected Answer: ✔ "a=10, b=16, a=10, b=57"

Correct Answer: ✔ "a=10, b=16, a=10, b=57"

Question 24

2.5 out of 2.5 points

What will be the result of executing the following C code?

```
#include <stdio.h>  
void fun(int a, int *b, int *c) ;  
int main()  
{  
    int x,y, n = 3;  
    fun(n, &x, &y) ;  
    printf("%d %d", x, y);  
    return 0;  
}  
  
void fun(int a, int *b, int *c)  
{  
    int x = 5;  
    int y = 10;  
    *b = a * a ;  
    *c = *b * a ;  
}
```

Selected Answer: ✔ 9 27

Correct Answer: ✔ 9 27

Question 25

2.5 out of 2.5 points

Which of the following statements is correct for this Python command:

```
myFile = open("file.txt","w")
```

Selected Answer: ✔ All given answers are correct.

Correct Answer: ✔ All given answers are correct.

Question 26

2.5 out of 2.5 points

What is the output of the following C code?

Assume the following inputs to the program:

num1 = 1.5, num2 = 9, and '*' as operator

```
1 #include <stdio.h>
2
3 int main() {
4     double num1, num2;
5     char oper;
6     double total;
7
8     scanf("%lf", &num1); // Assume num1 = 1.5
9     scanf("%lf", &num2); // Assume num2 = 9
10    scanf(" %c", &oper); // Assume oper is *
11
12    if (oper == '+') {
13        printf("Sum of two numbers is %.5f", (num1+num2));
14    }
15    else if (oper == '*') {
16        printf("Product of two numbers is %.4f", (num2*num1));
17    }
18    else {
19        printf("\nInvalid operator is used! ");
20    }
21    return 0;
22 }
```

Selected Answer: ☒ Product of two numbers is 13.5000

Correct Answer: ☒ Product of two numbers is 13.5000

Question 27

2.5 out of 2.5 points

What is the output of the following C code?

```
#include <stdio.h>

int main(void)
{
    int x,y,z;
    double a,b;
    x = 6 / 8;
    y = 10.0 / 4;
    a = 5 % 4;
    b = (double) 14 / 4;
    z = x / a * y + b;

    printf("%d %d %d %.5f %.3f", x, y, z, a, b);

    return 0;
}
```

Selected Answer: ☒ 0 2 3 1.00000 3.500

Correct Answer: ☒ 0 2 3 1.00000 3.500

Question 28

2.5 out of 2.5 points

What is the output of the below C code?

```
#include <stdio.h>

int main(){
    int Red = 90, Blue = 95, Green = 85 ;

    if(Red > Blue){
        if(Red > Green)
            printf("Red");

        else
            printf("Green");
    }
    else{
        if(Blue > Green)
            printf("Blue");
        else
            printf("Green");
    }
    return 0;
}
```

Selected Answer: ☒ Blue

Correct Answer: ☒ Blue

Question 29

2.5 out of 2.5 points

What will be the result of executing the following Python code:

```
tmp = [[1, 4, 2], [19, 7, 8], ['a', 3, 'c']]
tmp[2].append(5)
tmp[1].pop()
tmp[1].insert(1,5)
print(tmp)
```

Selected Answer: `[[1, 4, 2], [19, 5, 7], ['a', 3, 'c', 5]]`

Correct Answer: `[[1, 4, 2], [19, 5, 7], ['a', 3, 'c', 5]]`

Question 30

2.5 out of 2.5 points

What will be the result of executing the following Python code:

```
myValues = {5:2, 6:-4, -2:3, -4:-1}
sum = 0
for keys in myValues.keys() :
    sum = sum + myValues[keys]
print(sum)
```

Selected Answer: 0

Correct Answer: 0

Question 31

2.5 out of 2.5 points

What is the expected outcome of the following Python code when executed?

```
num=5

try:
    y=num/0
    print("Message 1")
except:
    print("Message 2")
```

Selected Answer: "Message 2" is printed.

Correct Answer: "Message 2" is printed.

Question 32

2.5 out of 2.5 points

What is the output of the following Python code fragment?

```
def fun(a, b, c):
    if a > b:
        if a < c:
            return a
    if b > a:
        if b < c:
            return b
    if c > a:
        if c < b:
            return c
    return None

print(fun(12, 15, 8))
```

Selected Answer: None

Correct Answer: None

Question 33

2.5 out of 2.5 points

What will be the output of the following python code:

```
class Square:
    def __init__(self, side = 1):
        self.area = side*side
        self.perimeter = side*4
```

```
s1 = Square()
s2 = Square(5)
print(s1.area, s2.area)
```

Selected Answer: 1 25

Correct Answer: 1 25

Question 34

2.5 out of 2.5 points

An input to a Python program that expects a positive input such as any of these **YES, Yes, yes, YeS, YEs, yES, yEs, yeS.** to terminate the program (showing **Quit** on the screen),

```
userinput = input('If you want to quit type Yes:')
```

Can be validated as follows:

Selected Answer: `if userInput in ['YES', 'Yes', 'yes', 'YeS', 'YEs', 'yES', 'yEs', 'yeS']:`
`print('Quit')`

Correct Answer: `if userInput in ['YES', 'Yes', 'yes', 'YeS', 'YEs', 'yES', 'yEs', 'yeS']:`
`print('Quit')`

```
print('Quit')
```

Question 35

2.5 out of 2.5 points

Which of the following statements is WRONG

Selected Answer: ☒ Encapsulation is the process of providing a public interface, which shows the implementation details
Correct Answer: ☒ Encapsulation is the process of providing a public interface, which shows the implementation details

Question 36

2.5 out of 2.5 points

```
class mobile:
    def __init__(self, number, model):
        self.number = number
        self.model = model

    def display_mobile_info(self):
        print("mobile Number: ", self.number)
        print("mobile Model: ", self.model)
```

Which of the following statements will create a class object that can be called later on

Selected Answer: ☒ mobile_A = mobile('05001253', 'iPhone')
Correct Answer: ☒ mobile_A = mobile('05001253', 'iPhone')

Question 37

2.5 out of 2.5 points

What is the value of **result** after the following code fragment is executed?

```
s = "5843619270"
result = len(s) - int(s[4])
print(result)
```

Selected Answer: ☒ 4
Correct Answer: ☒ 4

Question 38

2.5 out of 2.5 points

What is the output of the following Python code?

```
def fun(number) :
    s = 0
    if number == 0:
        return 0
    else:
        i = 1
        while (i <= number):
            s = s + i**2
            i += 1
        return s
print(fun(4))
```

Selected Answer: ☒ 30
Correct Answer: ☒ 30

Question 39

2.5 out of 2.5 points

What will be the result of executing the following C code?

```
#include <stdio.h>
int main()
{
    int i, n = 6;
    int f_1 = 1, f_2 = 1;

    if (n==0 || n==1)
        printf("%d ", 1) ;
    else if (n>=2)
        for (i=2; i<=n ; i++) {
            f_1 = f_1 + f_2 ;
            f_2 = f_1 - f_2 ;
        }
    if (n>=2)
        printf("%d", f_1);
    return 0;
}
```

Selected Answer: ☒ 13
Correct Answer: ☒ 13

Question 40

2.5 out of 2.5 points

What is the output of the following Python code?

```
x = [24, 4]
smallest =min(x)
i = 1
s = 0
while (i <= smallest):
    if (x[0] % i == 0) and (x[1] % i == 0):
        s = s + i
        i = i + 1
```



```
s += 1
i += 1
print(s)
```

Selected Answer: 7

Correct Answer: 7

Question 41

2.5 out of 2.5 points

What is the output of the following Python code fragment?

```
def fun(x):
    if x//3==1:
        return 1
    elif x//2==1:
        return 2
    else:
        return 3

print(fun(2))
```

Selected Answer: 2

Correct Answer: 2

Question 42

2.5 out of 2.5 points

What is the output of the following Python code:

```
d = { 1: 'a', 2:'b' , 3:'c'}
d['c'] = 11
d[2] += 'e'
d.pop(1)
for i in d:
    print( i, d[i], end = ' ' )
```

Selected Answer: 2 be 3 c c 11

Correct Answer: 2 be 3 c c 11

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← OK