FACULTY OF COMPUTING
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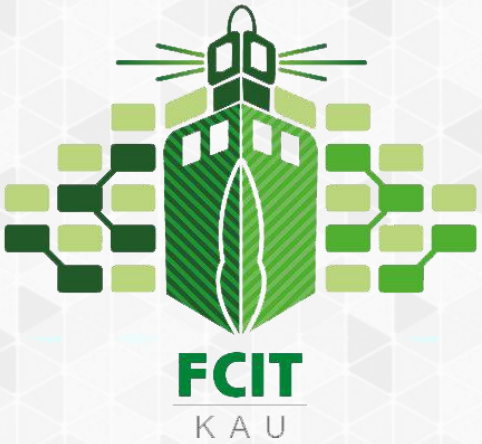

كلية الحاسبات
وتقنية المعلومات
جامعة الملك عبدالعزيز

Sample Exam Questions

Mid-Term Exam 1 – Part 1 (MCQ)

CPIT 110 (Problem-Solving and Programming)

تنبيه!

- هذه الأسئلة عبارة عن عينة فقط توضح طريقة أسئلة اختبار الدوري الأول - الجزء الأول (الاختيارات) لمقرر البرمجة وحل المشكلات (CPIT-110).
- هذه الأسئلة لا يُعتمد عليها للمذاكرة.
- قد لا تشمل هذه الأسئلة جميع المواضيع المقررة للاختبار.
- هذه الأسئلة مناسبة للمراجعة بعد الانتهاء من مذاكرة وتطبيق المواضيع المقررة للاختبار.
- حلول الأسئلة مرفقة نهاية صفحات هذا الملف.

Question #1

Which of the following code is correct?

a)
```
print("Programming is fun")
  print("Python is fun")
```

b)
```
print("Programming is fun")
print("Python is fun")
```

c)
```
print("Programming is fun)
print("Python is fun")
```

d)
```
print("Programming is fun)
print("Python is fun")
```

Question #2

Which of the following code is correct?

a) `// Comment`

b) `/* Comment`

c) `#  Comment`

d) `$$ Comment`

Question #3

Which of the following code is correct?

a) `// comments //`

b) `/* comments */`

c) `''' comments '''`

d) `/# comments #/`

Question #4

Which of the following code is correct?

a)
```
print("Programming is fun")
  print("Python")
print("Computer Science")
```

b)
```
print("Programming is fun")
  print("Python")
     print("Computer Science")
```

c)
```
  print("Programming is fun")
print("Python")
print("Computer Science")
```

d)
```
print("Programming is fun")
print("Python")
print("Computer Science")
```

Question #5

What function do you use to read a string?

a) `input("Enter a string")`

b) `eval(input("Enter a string"))`

c) `enter("Enter a string")`

d) `eval(enter("Enter a string"))`

Question #6

What is the result of eval("1 + 3 * 2")?

a) `"1 + 3 * 2"`

b) `7`

c) `8`

d) `"1 + 6"`

Question #7

If you enter **1 2 3** in **three separate lines**, when you run this program, what will be displayed?

```
print("Enter three numbers: ")
number1 = eval(input())
number2 = eval(input())
number3 = eval(input())

# Compute average
average = (number1 + number2 + number3) / 3

# Display result
print(average)
```

a) 1.0

b) 2.0

c) 3.0

d) 4.0

Question #8

If you enter **1 2 3** in **one line**, when you run this program, what will be displayed?

```
print("Enter three numbers: ")
number1 = eval(input())
number2 = eval(input())
number3 = eval(input())

# Compute average
average = (number1 + number2 + number3) / 3

# Display result
print(average)
```

a) The program runs correctly and displays 1.0

b) The program runs correctly and displays 2.0

c) The program runs correctly and displays 3.0

d) The program will have a runtime error on the input.

Question #9

You can place the line continuation symbol __ at the end of a line to tell the interpreter that the statement is continued on the next line.

a) /

b) \

c) #

d) &

Question #10

Which of the following is a valid identifier?

a) `$343`

b) `mile`

c) `9X`

d) `8+9`

Question #11

If you enter 1, 2, 3, in one line, when you run this program, what will be displayed?

```
number1, number2, number3 = eval(input("Enter three
                                        numbers: "))

# Compute average
average = (number1 + number2 + number3) / 3

# Display result
print(average)
```

a) 1.0

b) 2.0

c) 3.0

d) 4.0

Question #12

What will be displayed by the following code?

```
x = 1
x = 2 * x + 1
print(x)
```

a) 0

b) 1

c) 2

d) 3

Question #13

What will be displayed by the following code?

```
x = 1
x = x + 2.5
print(x)
```

a) 1

b) 2

c) 3

d) 3.5

Question #14

What will be displayed by the following code?

```
x, y = 1, 2
x, y = y, x
print(x, y)
```

a) 1 1

b) 2 2

c) 1 2

d) 2 1

Question #15

To following code reads two number. Which of the following is the correct input for the code?

```
x, y = eval(input("Enter two numbers: "))
```

a) `1 2`

b) `"1 2"`

c) `1, 2`

d) `1, 2,`

Question #16

What is the result of 3 / 2?

a) `1`

b) `1.5`

c) `2`

d) `3`

Question #17

What is the result of 3 // 2?

a) `1`

b) `1.5`

c) `2`

d) `3`

Question #18

Which of the following expressions will yield 0.5?

a) `1 / 2`

b) `1 // 2`

c) `1.0 // 2`

d) `2 / 2`

Question #19

Which of the following expression results in a value 1?

a) `2 % 1`

b) `15 % 4`

c) `25 % 5`

d) `3 % 2`

Question #20

25 % 1 is _____

a) 1

b) 2

c) 3

d) 0

Question #21

24 % 5 is _____

a) 1

b) 2

c) 4

d) 0

Question #22

2 ** 3 evaluates to _____.

a) `9`

b) `8`

c) `9.0`

d) `8.0`

Question #23

2 ** 3.0 evaluates to _____.

a) `9`

b) `8`

c) `9.0`

d) `8.0`

Question #24

2 * 3 ** 2 evaluates to _____.

a) 36

b) 18

c) 12

d) 81

Question #25

What is y displayed in the following code?

```
x = 1
y = x = x + 1
print("y is", y)
```

a) y is 0.

b) y is 1 because x is assigned to y first.

c) y is 2 because x + 1 is assigned to x and then x is assigned to y.

d) The program has a compile error since x is redeclared in the statement int y = x = x + 1.

Question #26

What is the result of evaluating 2 + 2 ** 3 / 2?

a) `4`

b) `6`

c) `4.0`

d) `6.0`

Question #27

What is the value of i printed?

```
j = i = 1
i += j + j * 5
print("What is i?", i)
```

a) 1

b) 5

c) 6

d) 7

Question #28

What is x after the following statements?

```
x = 1
x *= x + 1
```

a) x is 1

b) x is 2

c) x is 3

d) x is 4

Question #29

What is x after the following statements?

```
x = 2
y = 1
x *= y + 1
```

a) x is 1

b) x is 2

c) x is 3

d) x is 4

Question #30

To add a value 1 to variable x, you write

a) `1 + x = x`

b) `x += 1`

c) `x := 1`

d) `x =+ 1`

Question #31

Which of the following statements are the same?

```
(A)  x -= x + 4
(B)  x = x + 4 - x
(C)  x = x - (x + 4)
```

a) (A) and (B) are the same

b) (A) and (C) are the same

c) (B) and (C) are the same

d) (A), (B), and (C) are the same

Question #32

Suppose x is 1. What is x after x += 2?

a) 1

b) 2

c) 3

d) 4

Question #33

Suppose x is 1. What is x after x -= 1?

a) 0

b) 1

c) -1

d) 2

Question #34

What is x after the following statements?

```
x = 1
y = 2
x *= y + 1
```

a) x is 1

b) x is 2

c) x is 3

d) x is 4

Question #35

Which of the following functions return 4.

a) `int(3.4)`

b) `int(3.9)`

c) `round(3.4)`

d) `round(3.9)`

Question #36

Which of the following functions cause an error?

a) `int("034")`

b) `eval("034")`

c) `int(3.4)`

d) `eval("3.4")`

Question #37

What is max(3, 5, 1, 7, 4)?

a) 1

b) 3

c) 5

d) 7

Question #38

What is min(3, 5, 1, 7, 4)?

a) 1

b) 3

c) 5

d) 7

Question #39

What is round(3.52)?

a) `3.5`

b) `3`

c) `4`

d) `2`

Question #40

What is round(6.5)?

a) 4

b) 5

c) 6

d) 7

Question #41

What is round(7.5)?

a) 6

b) 7

c) 8

d) 5

Question #42

Which of the following statement prints smith\exam1\test.txt?

a) `print("smith\exam1\test.txt")`

b) `print("smith\\exam1\\test.txt")`

c) `print("smith\"exam1\"test.txt")`

d) `print("smith"\exam1"\test.txt")`

Question #43

The expression "Good " + 1 + 2 + 3 evaluates to _____.

a) `Good123`

b) `Good6`

c) `Good 123`

d) `Illegal expression`

Question #44

What will be displayed by the following code?

```
print("A", end = ' ')
print("B", end = ' ')
print("C", end = ' ')
print("D", end = ' ')
```

a) ABCD

b) A, B, C, D

c) A B C D

d) A, B, C, D will be displayed on four lines

Question #45

To format a number x to 3 digits after the decimal point, use:

a) `format(x, "5.3f")`

b) `format("5.3f", x)`

c) `format(x, "5.4f")`

d) `format("5.3f", x)`

Question #46

Suppose x is 345.3546, what is format(x, "10.3f")? (note b represents a blank space)

a) `bb345.355`

b) `bbb345.355`

c) `bbbb345.355`

d) `bbb345.354`

Question #47

What will be displayed by the following code? ? (note ? represents a blank space)

```
print(format("Welcome", "10s"), end = '#')
print(format(111, "4d"), end = '#')
print(format(924.656, "3.2f"))
```

a) ???Welcome#?111#924.66

b) Welcome#111#924.66

c) Welcome#111#.66

d) Welcome???#?111#924.66

Question #48

What will be displayed by the following code? ? (note ? represents a blank space)

```
print(format("Welcome", ">10s"), end = '#')
print(format(111, "<4d"), end = '#')
print(format(924.656, ">10.2f"))
```

a) ???Welcome#?111#924.66

b) ???Welcome#?111#????924.66

c) ???Welcome#111?#????924.66

d) Welcome???#111?#????924.66

Question #49

Suppse number contains integer value 4, which of the following statement is correct?

a) `print(format(number, "2d"), format(number ** 1.5, "4d"))`

b) `print(format(number, "2d"), format(number ** 1.5, "4.2d"))`

c) `print(format(number, "2d"), format(number ** 1.5, "4.2f"))`

d) `print(format(number, "2d"), format(number ** 1.5, "4.2s"))`

Question #50

The "less than or equal to" comparison operator is _____.

a) <<

b) <=

c) !=

d) >=

Question #51

The equal comparison operator is _____.

a) `<>`

b) `!=`

c) `==`

d) `=`

Question #52

To generate a random integer between 0 and 5, use _____.

a) `random.randint(0, 5)`

b) `random.randint(0, 6)`

c) `random.randint(1, 5)`

d) `random.randrange(0, 5)`

Question #53

random.randint(0, 1) returns _____.

a) `0`

b) `1`

c) `0 or 1`

d) `2`

Question #54

random.random() returns _____.

a) a float number i such that 0 < i < 1.0

b) a float number i such that 0 <= i < 1.0

c) a float number i such that 0 <= i <= 1.0

d) a float number i such that 0 < i < 2.0

Question #55

Which of the following code displays the area of a circle if the radius is positive.

a) `if radius != 0: print(radius * radius * 3.14159)`

b) `if radius >= 0: print(radius * radius * 3.14159)`

c) `if radius > 0: print(radius * radius * 3.14159)`

d) `if radius <= 0: print(radius * radius * 3.14159)`

Question #56

What is the output of the following code?

```
x = 0
if x < 4:
    x = x + 1

print("x is", x)
```

a) x is 0

b) x is 1

c) x is 2

d) x is 3

Question #57

Suppose isPrime is a boolean variable, which of the following is the correct statement for testing if isPrime is true.

a) `if isPrime = True:`

b) `if isPrime == TRUE:`

c) `if isPrime:`

d) `if not isPrime = False:`

Question #58

Analyze the following code:

```
even = False
if even = True:
    print("It is even!")
```

a) The program has a syntax error in line 1 (even = False)

b) The program has a syntax error in line 2 if even = True is not a correct condition. It should be replaced by if even == True: or if even:.

c) The program runs, but displays nothing.

d) The program runs and displays It is even!.

Question #59

Analyze the following code:

```
even = False
if even:
    print("It is even!")
```

a) The code displays It is even!

b) The code displays nothing.

c) The code is wrong. You should replace if even: with if even == True:

d) The code is wrong. You should replace if even: with if even = True:

Question #60

Suppose x = 1, y = 2, and z = 1. What will be displayed by the following statement?

```
if x > 0:
    print("***", y, end=" ")
if z > 0:
    print("$$$", y, end=" ")
```

a) *** 2

b) $$$ 2

c) *** 2 $$$ 2

d) *** $$$

Solutions

Question #	Correct Answer
1	B
2	C
3	C
4	D
5	A
6	B
7	B
8	D
9	B
10	B

Question #	Correct Answer
11	B
12	D
13	D
14	D
15	C
16	B
17	A
18	A
19	D
20	D

Solutions

Question #	Correct Answer
21	C
22	B
23	D
24	B
25	C
26	D
27	D
28	B
29	D
30	B

Question #	Correct Answer
31	B
32	C
33	A
34	C
35	D
36	B
37	D
38	A
39	C
40	C

Solutions

Question #	Correct Answer
41	C
42	B
43	D
44	C
45	A
46	B
47	D
48	C
49	C
50	B

Question #	Correct Answer
51	C
52	A
53	C
54	B
55	C
56	B
57	C
58	B
59	B
60	C