SC3

1. Definitions and Short Answers

1. When you call the function ord('A') it returns 65. What does it mean?

   > 💡 ASCII in A is 65

2. What is the value of chr(70)? (based on the knowledge of the previous question)

   > 💡 F

3. What is the difference between **ASCII** character set and **Unicode**? If a character is in ASCII, is it also in Unicode? Are there characters in Unicode that are not in ASCII?

   > 💡 ASCII只有0~127，Unicode則是全部文字。
   > Yes
   > Yes

4. How is **newline** (also known as a **line feed**) represented as a string literal? In other words, how do you print a newline?

   > 💡 \n

5. What is a **carriage return**? What is its string literal, and what effect does it have when printed?

💡 回到同一列最左邊
\r

6. From the command line, what keys do you type to **kill** a running Python program?

💡 ctrl+c

7. Give an example of a **string literal** for McDonald's

💡 "McDonald\'s"

8. Give an example of an **integer literal**

💡 0b1001

9. Give an example of a **floating point literal**

💡 1.02

10. What is the difference between print(hello) and print("hello")?

💡 前者印hello這個變數存放的值，後者印hello這個string

11. What is a **numeral**? What is the difference between a numeral and a **number**?

💡 number: the numeric quantity
numeral: a (general) notation for numbers

12. What is the **value** of the integer literal 0b101? Express your answer in base-10 or in English.

💡 5

13. What is the **octal literal** for the integer value 10?

💡 oct(10) or 0o12

14. What is the **value** of the integer literal 0x12? Express your answer in base-10 or in English.

💡 18

15. What is the return **value** of
    - int('20')

    💡 20

    - int('0x20')

    💡 ValueError: invalid literal for int() with base 10: '0x20'

    - oct(16)

    💡 0o20

    - bin(16)

💡 0b_10000

16. What is the value of

- 0b0101 & 0b1100

💡 4

- 0b0101 | 0b1100

💡 13

- 0b0101 ^ 0b1100

💡 9

- ~0b0011

💡 0b1100

- 0b1011 << 2

💡 0b101100

- 0b1011 >> 2write your answers as binary literals

💡 0b10 (0b1011是11，正數)

17. What are two possible values of the bool class? True / False

18. What is the value of

- True and False

- True or False

- True and True

- True or False

- False and False

- False or False

19. What is the value of

- bool(20)

- bool(0)

- bool(None)

- bool([ ])

- bool([])

- bool(0.0)

- bool('0')

- bool('hello')

- bool('zero')

- bool('')

- bool(' ')

- bool("")

- bool("""""")

- bool(""""")

- bool("""""")

- `bool(20)` - `True`
- `bool(0)` - `False`
- `bool(None)` - `False`
- `bool([])` - `False`
- `bool([ ])` - `False`
- `bool(0.0)` - `False`
- `bool('0')` - `True` (non-empty strings are truthy)
- `bool('hello')` - `True`
- `bool('zero')` - `True`
- `bool('')` - `False`
- `bool(' ')` - `True` (strings with whitespace are truthy)
- `bool("")` - `False`
- `bool('''''')` - `False`
- `bool("""""")` - `False`
- `bool('""')` - `True` (non-empty strings are truthy)
- `bool("''")` - `True` (non-empty strings are truthy)

20. What is the value of

- 20 or False
- 20 and False
- False and 20
- False or 20
- [] or 20
- [] and 20
- 20 or [ ]
- 20 and [ ]
- 30 or 20
- 20 or 30

💡 20 / False / False / 20 / 20 / [] / 20 / [] / 30 / 20

21. Assume x = 3 and y = 2, what is the value of

- x == 3 and y > 2

- x <= 3 and y >= 2

- x != 3 or y >= 2

- x != 3 and y == 2

- x >= 3 >= y > 2

- x >= 3 > y >= 2

- not (x != 3) and not (y < 2)

💡 False / True / True / False / True / False

22. What is the value of

- "hello" > "Hello"

- 'hello' > 'world'

- 'hello' == 'HELLO'

- 'hello' == 'he11o'

- '2000' == '2OOO'

- 'Abacus' < 'abacus'

- 'about' < 'abnormal'

- 'l' == '|'

- 'ZOO' != '200'

- 'uber' == 'über'

- 'naive' == 'naïve'

💡 True / False / False / False / False / True / False / False / True / False / False

23. What is the meaning of **lexicographical order**?

💡 字典排序

What is the **data type** of 2+3j? What is the meaning of 3j?

💡 complex number
imaginary part = 3