2024/07

MASTER OF COMPUTER APPLICATION
FOURTH SEMESTER [SPECIAL REPEAT]
PYTHON PROGRAMMING
MCA-402.6
[USE OMR SHEET FOR OBJECTIVE PART]

SET A

Duration: 3 hrs.   Full Marks: 70

(Objective)

Time: 30 mins.   Marks: 20

Choose the correct answer from the following: *1×20=20*

1. What is the purpose of an if/else statement?
   a. An if/else statement tells the computer which chunk of code to run the instructions you coded are incorrect
   b. An if/else statement runs one chunk of code if all the imports were successful and another chunk of code if the imports were not successful
   c. An if/else statement executes one chunk of code if a condition it true, but a different chunk of code if the condition is false
   d. An if/else statement executes one chunk of code to run if there is enough memory to handle it and which chunk of code to run if there is not enough memory to handle it

2. Is python case sensitive when dealing with identifiers?
   a. Yes
   b. No
   c. May be
   d. None of these

3. All keywords in python are in:
   a. UPPER CASE
   b. Lower case
   c. Capitalized
   d. None of the mentioned

4. Which one of the following has the highest precedence in an expression?
   a. Addition
   b. Parenthesis
   c. Multiplication
   d. Exponential

5. Python allows string slicing. What is the output of below code?
   s='cppbuzzchicago'
   print(s[3:5])
   a. buzz
   b. bu
   c. pbuzz
   d. None of these

6. Which of the following is not a declaration of the dictionary?
   a. {1:'A',2:'B'}
   b. {1,"A",2"B"}
   c. dict([[1,"A"],[2,"B"]])
   d. {}

7. What will be the output of the following python code?
   i=0
   while true:
       if i%2==0:
           break
       print i
       i+=2

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a. 1
b. 1 2 5 8 9
c. 1 3 5 7 9 11
d. None of these

8. What is the output of this code?
```
a,b=1,0
a=a^b
b=a^b
a=a^b
print(a)
```
a. 0
b. 1
c. 2
d. Code will rise a runtime error

9. How do you denote the end of a block in python?
a. By indenting the next line less than the current
b. With the semicolon ;
c. With the end keyword
d. With a backslash /

10. Which of the following is used to initialize multiple variables with a common value?
a. x=y:y=33
b. x=y=z=33
c. x=z;y=z;x=33
d. x&y&z=33

11. What is the output of the following code?
```
deffunc(x, ans):
  if(x==0):
    return 0
  else:
    return func(x-1, x+ans)
print(func(2,0))
```
a. 0
b. -1
c. -2
d. -3

12. Which can be an Identifier among them in Python?
a. -abc
b. -$12a
c. _xy1
d. -@python

13. What will be the output of the following code snippet?
```
example=["sunday","monday","tuesday","wednessday"];
print(example[-3: -1])
```
a. ['monday','tuesday']
b. ['sunday','monday']
c. ['tuesday','wednessday']
d. ['monday','tuesday','wednessday']

14. What is the output of the following python programs?
```
y=18
z=lambda x:x*y
print(z(3))
```
a. 54
b. 48
c. 64
d. None of these

15. What value is printed when the following code is executed?

```
name="Computer_Science"
defmyfunction(parameter):
        value="First"
        value="parameter"
        print(value)
myfunction("Second")
```

a. Computer_Science
b. First
c. Second
d. parameter

16. What will be the datatype of the var in the below code snippet?

```
var = 10
print(type(var))
var = "Hello"
print(type(var))
```

a. int and str
b. str and str
c. int and int
d. str and int

17. What will be the output of the following code snippet?

```
print(type(5 / 2))
print(type(5 // 2))
```

a. float and float
b. float and int
c. int and float
d. int and int

18. Which of the following types of loops are not supported in Python?
a. for
b. while
c. do while
d. none of these

19. What will be the output of the following code snippet?

```
square = lambda x: x ** 2
a = []
for i in range(5):
a.append(square(i))

print(a)
```

a. [1,4,9,16,25]
b. [0,1,2,3,4]
c. [0,1, 4 ,9 ,16]
d. [1,2,3,4,5]

20. Which of the following are valid escape sequences in Python?
a. \n
b. \\
c. \t
d. All the above

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$$\boxed{\textbf{Descriptive}}$$

Time : 2 hr. 30 mins.   Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. How would you define inheritance? Briefly describe the various   10
    inheritance types using an appropriate example.

2. Illustrate the different types of control flow statements available in   5+5=10
    Python with flowcharts. Explain the following list of methods with an
    example: a) append()   b) extend()   c) insert()   d) index()   e) sort()

3. Answer the following questions: 5+5=10
    a) Discuss the relation between tuples and lists in detail.
    b) How does constructor overriding work? Briefly explain with a
       relevant example. How may a child class be made to contain a
       parent class's properties? Give an instance.

4. What is the difference between local and global variables? Explain with   3+2+5=10
    the help of a suitable example. Write a Python program using a function
    that returns a list of the numbers of the Fibonacci series, instead of
    printing it.

5. a) Explain the need for a continue and break statement. Also explain   2+3+3+2=10
       why Python is called as dynamic and strongly typed language?
    b) Why do we need Encapsulation in Python? What do you mean by
       Protected member?

6. a) Define the following with the necessary examples.   5+5=10
       i) if statement
       ii) if-else-if statement
       iii) nested –if statement.
    b) With the necessary examples describe the use of continue and break
       statement.

7. a) Explain the difference between modules and packages. How do you   5+5=10
       define an Abstract class in Python?
    b) Write a program to find given string is palindrome or not using
       function.

8. a) List different data types in Python.   2×5=10
    b) State how to perform lambda function in Python.
    c) Write the difference between Class and Instances.
    d) Mention the use of //, **, and % operators in Python.
    e) Explain the use of Self() function in Python.

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