

Enrollment No.....



Faculty of Engineering  
End Sem (Even) Examination May-2018  
CA5EL02 Python Programming

Programme: MCA Branch/Specialisation: Computer Application

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. Which of the following operator is used to compare memory locations of two objects? **1**  
(a) Identity Operator (b) Membership Operator  
(c) Bitwise Operator (d) Logical Operators
- ii. Which of the following symbols is used to make single line comments in Python? **1**  
(a) # (b) @ (c) ''' (d) &
- iii. What will be the output of the following program? **1**  
def Display(Name,id):  
    print(Name,id)  
Display("xyz",10)  
Display(20,"abc")  
(a) Error: Type Mismatch (b) xyz 10 20 abc  
(c) xyz 10 abc 20 (d) None of these
- iv. How will a new element be added to the empty List L1? **1**  
(a) L1.append(10) (b) L1.add(10)  
(c) L1.appendLast(10) (d) L1.addLast(10)
- v. What method is called when an object is created? **1**  
(a) self (b) obj.self (c) \_\_init\_\_ (d) int

[2]

- vi. Analyse the following code: **1**
- ```
class A:
    def __init__(self,p="Python"):
        self.p=p

    def print(self):
        print(self.p)
a=A()
a.print()
```
- (a) The program has an error because class A does not have a constructor.  
(b) The program has an error because class A should have a constructor.  
(c) The program executes fine and prints nothing.  
(d) The program executes fine and prints Python.
- vii. What will be the output of the following code? **1**
- ```
Jersey={'sachin':10,'virat':18}
print(jersey[10])
```
- (a) Sachin (b) Virat (c) Error (d) None of these
- viii. At what position will the file pointer be placed whenever we open file for reading or writing? **1**
- (a) Middle (b) Beginning (c) Second line (d) End
- ix. Which module in python supports regular expression? **1**
- (a) re (b) regex (c) pyregex (d) None of these
- x. What will be the output of following code:- **1**
- ```
i=iter({1,2,3})
print(type(i))
```
- (a) <class 'set\_iterator'> (b) <class 'list\_iterator'>  
(c) <class 'dict'> (d) <class 'string'>

Q.2

- Attempt any two:
- i. Write features of Python in detail. **5**
- ii. Define Identity & Membership operator with an example. **5**
- iii. Write use of python in various fields. **5**

[3]

- Q.3 i. Write a function that takes any two arguments. One argument is the name of the employee, and the other argument is the PF. Call this function two times and prints employee name and PF every time. **3**
- ii. Describe different ways of argument passing in the function. Explain each type with example. **7**
- OR iii. Write five methods for each of the following data type with example: **7**
- (a) String (b) List
- Q.4 Attempt any two:
- i. Write a program that has class student with method subject. Create two subclasses datascience and computerscience. Now access the method subject explicitly with the class computerscience and implicitly with the class datascience. **5**
- ii. Write a program to illustrate the use of \_\_init\_\_ and \_\_del\_\_ method. **5**
- iii. Write a program to inherit attributes of the parent class to a child class. **5**
- Q.5 i. Describe the basics of dictionaries. **2**
- ii. What is the use of zip() and zip(\*)? **3**
- iii. Define methods of math and random module. **5**
- OR iv. Write the numbers from 1 to 20 to the output file WriteNumbers.txt **5**
- Q.6 i. Define decorators and closures. **4**
- ii. Explain iterator and generator with examples. **6**
- OR iii. Explain regular expression. Describe match, search and findall method with examples. **6**

\*\*\*\*\*

## Marking Scheme

### CA5EL02 Python Programming

|     |                                                                                                                                                                                                                          |                                                                                                                             |                                                                                                                        |          |  |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------|--|
| Q.1 | i. Which of the following operator is used to compare memory locations of two objects?<br>(a) Identity Operator                                                                                                          | <b>1</b>                                                                                                                    |                                                                                                                        |          |  |
|     | ii. Which of the following symbols is used to make single line comments in Python?<br>(a)#                                                                                                                               | <b>1</b>                                                                                                                    |                                                                                                                        |          |  |
|     | iii. What will be the output of the following program?<br><pre>def Display(Name,id):     print(Name,id) Display("xyz",10) Display(20,"abc")</pre> (b) xyz 10 abc 20                                                      | <b>1</b>                                                                                                                    |                                                                                                                        |          |  |
|     | iv. How will a new element be added to the empty List L1?<br>(a) L1.append(10)                                                                                                                                           | <b>1</b>                                                                                                                    |                                                                                                                        |          |  |
|     | v. What method is called when an object is created?<br>(c) __init__                                                                                                                                                      | <b>1</b>                                                                                                                    |                                                                                                                        |          |  |
|     | vi. Analyse the following code:<br><pre>class A:     def __init__(self,p="Python"):         self.p=p      def print(self):         print(self.p)  a=A() a.print()</pre> (d) The program executes fine and prints Python. | <b>1</b>                                                                                                                    |                                                                                                                        |          |  |
|     | vii. What will be the output of the following code?<br><pre>Jersey={'sachin':10,'virat':18} print(jersey[10])</pre> (c) Error                                                                                            | <b>1</b>                                                                                                                    |                                                                                                                        |          |  |
|     | viii. At what position will the file pointer be placed whenever we open file for reading or writing?<br>(b) Beginning                                                                                                    | <b>1</b>                                                                                                                    |                                                                                                                        |          |  |
|     |                                                                                                                                                                                                                          |                                                                                                                             | ix. Which module in python supports regular expression?<br>(a) re                                                      | <b>1</b> |  |
|     |                                                                                                                                                                                                                          |                                                                                                                             | x. What will be the output of following code:-<br><pre>i=iter({1,2,3}) print(type(i))</pre> (a) <class 'set_iterator'> | <b>1</b> |  |
|     |                                                                                                                                                                                                                          |                                                                                                                             | Attempt any two:                                                                                                       |          |  |
|     | Q.2                                                                                                                                                                                                                      | i. Write Features of Python in detail.<br>Describing each feature 1 mark<br>[0.5 marks for any 5 features]                  | (1 mark *5)                                                                                                            | <b>5</b> |  |
|     |                                                                                                                                                                                                                          | ii. Definition of Identity<br>Definition of Membership operator<br>1.5-mark for each example (1.5 mark*2)                   | 1 mark<br>1 mark<br>3 marks                                                                                            | <b>5</b> |  |
|     |                                                                                                                                                                                                                          | iii. Use of python 1 mark for describing each uses                                                                          | (1 mark *5)                                                                                                            | <b>5</b> |  |
|     | Q.3                                                                                                                                                                                                                      | i. Defining function<br>Calling of function<br>Two outputs                                                                  | 1 mark<br>1 mark<br>1 mark                                                                                             | <b>3</b> |  |
|     |                                                                                                                                                                                                                          | ii. Different ways of argument passing in the function<br>1-mark for each argument passing(1 mark*4)<br>3-marks for example | 4 marks<br>3 marks                                                                                                     | <b>7</b> |  |
|     | OR                                                                                                                                                                                                                       | iii. (a) String<br>0.5-marks for each method (0.5 mark*5)<br>Example                                                        | 2.5 marks<br>1 mark                                                                                                    | <b>7</b> |  |
|     |                                                                                                                                                                                                                          | (b) List<br>0.5-marks for each method(0.5 mark*5)<br>Example                                                                | 2.5 marks<br>1 mark                                                                                                    |          |  |
|     | Q.4                                                                                                                                                                                                                      | Attempt any two:                                                                                                            |                                                                                                                        |          |  |
|     |                                                                                                                                                                                                                          | i. 1-mark for defining each class(1 mark *3)<br>Defining method and calling method                                          | 3 marks<br>2 marks                                                                                                     | <b>5</b> |  |
|     |                                                                                                                                                                                                                          | ii. __init__ method<br>__del__ method                                                                                       | 2.5 marks<br>2.5 marks                                                                                                 | <b>5</b> |  |
|     |                                                                                                                                                                                                                          | iii. Defining parent & child class<br>Declaring object and method calling                                                   | 3 marks<br>2 marks                                                                                                     | <b>5</b> |  |

|     |      |                                                          |           |          |
|-----|------|----------------------------------------------------------|-----------|----------|
| Q.5 | i.   | Basics of dictionaries definition + example              |           | <b>2</b> |
|     | ii.  | Function of zip()                                        | 1.5-marks | <b>3</b> |
|     |      | Function of zip() zip(*)                                 | 1.5-marks |          |
|     | iii. | Methods of math and random module.                       | 2.5-marks | <b>5</b> |
|     |      | Random module.                                           | 2.5-marks |          |
| OR  | iv   | Numbers from 1 to 20 to the output file WriteNumbers.txt |           | <b>5</b> |
|     |      | 5-marks for program                                      |           |          |
| Q.6 | i.   | Define decorators and closures.                          |           | <b>4</b> |
|     |      | Defining decorators                                      | 2 marks   |          |
|     |      | Defining closures                                        | 2 marks   |          |
|     | ii.  | Iterator with example                                    | 3 marks   | <b>6</b> |
|     |      | Generator with example                                   | 3 marks   |          |
| OR  | iii. | Regular expression                                       | 3 marks   | <b>6</b> |
|     |      | 1-mark for each match.search,findall(1 mark * 3)         | 3 marks   |          |

\*\*\*\*\*