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Enrolment Number						

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Monsoon, 2023

MCA Semester Examinations

PROGRAMMING TECHNIQUES USING PYTHON

Course Code: MCA23501T

Full Marks -60 Time $-2^{1}/_{2}$ hours

The figure in the margin indicates full marks for the questions.

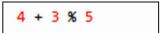
Part A

Answer ALL questions
Multiple Choice (10 x 1mark = 10marks)

Q.1 Choose the correct alternatives from the following

 $(10 \times 1=10)$

- (i) Who developed Python Programming Language?
 - a) Wick van Rossum
 - b) Rasmus Lerdorf
 - c) Guido van Rossum
 - d) Niene Stom
- (ii) What will be the value of the following Python expression?



- a) 7
- b) 2
- c) 4
- d) 1
- (iii) Which of the following is not a core data type in Python programming?
 - a) Tuples
 - b) Lists
 - c) Class
 - d) Dictionary
- (iv) Which of the following functions is a built-in function in python?
 - a) factorial()
 - b) print()
 - c) seed()
 - d) All of the above
- (v) Which type of Programming does Python support?
 - a) object-oriented programming
 - b) structured programming
 - c) functional programming

- d) all of the mentioned
- (vi) What will be the output of the following Python code?

```
x = 'abcd'
for i in x:
    print(i.upper())
```

- a) a B C D
- b) a b c d
- c) error
- d) ABCD
- (vii) Which keyword is used for function in Python language?
 - a) function
 - b) def
 - c) fun
 - d) define
- (viii) What will be the output of the following Python code snippet?

```
for i in [1, 2, 3, 4][::-1]:
    print(i, end=' ')
```

- a) 4321
- b) Error
- c) 1234
- d) None of the Above
- (ix) Is Python case sensitive when dealing with identifiers?
 - a) No
 - b) Yes
 - c) Machine Dependent
 - d) None of the Above
- (x) What will be the output of the following Python code?

```
i = 1
while True:
    if i%3 == 0:
        break
    print(i)
    i + = 1
```

- a) 123
- b) Error
- c) 12
- d) None of the Above

Part B

Answer ANY FOUR questions (4x 5 mark = 20 marks)

(5) (5)

Q.2 Q.3						
Q.4	What are the different loop control statements available in python? Explain with suitable examples.	(5)				
Q.5	•					
Q.6	Explain the use of List in Python using the following functions (a) range() function (b) iter() function	(5)				
Q.7	What are the rules for naming a variable in Python?					
	Part C					
	Answer ANY TWO questions (2 x10 Mark = 20 Marks)					
Q.8	 (a) Explain the following functional programming tools that works on all list item in Python i. map() ii. filter() iii. reduce() 	(2 x 3=6)				
	(b) List four advantages of Tuple over List	(4)				
Q.9	(a) What are Python's dictionaries? Explain the different operations of deleting item from a dictionary in Python with suitable Python Program	(2+4=6)				
	(b) What is Polymorphism in Python? Explain overriding with suitable example in Python	(4)				
Q.10	(a) Write in brief about Set in python. Explain the Union, Intersection, Difference and Symmetric Difference using suitable examples of Set in Python	(5)				
	(b) Explain the use of the following built-in function with suitable example in Python(a) zip() function in tuple(b) enumerate() function in list	(5)				

Part D

Short Notes (2 x5 Mark = 10 Marks)

Q.11 Write short-notes on *any two*

 $(2 \times 5 = 10)$

- (a) Strings and its Operations in Python
- (b) Inheritance and its Type in Python
- (c) Applications of Python in the real-word
- (d) Object Oriented features supported by Python
