



44006

Library
Brainware University
398, Ramkrishnapur Road, Barasat
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BRAINWARE UNIVERSITY

Term End Examination 2025-2026
Programme – BCA(MAWT)-Hons-2024
Course Name – Python Programming
Course Code - BMT47110 (T)
(Semester IV)

Full Marks : 40

Time : 2:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 10=10

1. Choose the correct alternative from the following :

(i) Which of the following is a valid Python variable name?

- | | |
|----------|----------|
| a) 2num | b) num-1 |
| c) num_1 | d) @num |

(ii) Which operator is used for exponentiation in Python?

- | | |
|-------|-------|
| a) ^ | b) * |
| c) ** | d) // |

(iii) Why are tuples preferred over lists in some cases?

- | | |
|--------------|----------------|
| a) Faster | b) Mutable |
| c) Immutable | d) Larger size |

(iv) What is the output of (10,20,30)[-1]?

- | | |
|-------|----------|
| a) 10 | b) 20 |
| c) 30 | d) Error |

(v) Which data structure is commonly used as array in Python?

- | | |
|---------------|---------|
| a) Tuple | b) Set |
| c) Dictionary | d) List |

(vi) Lambda function can have_____.

- | | |
|------------------------|-----------------------|
| a) No parameters | b) One parameter |
| c) Multiple parameters | d) No parameters only |

(vii) Which concept allows one method to behave differently in different classes?

- | | |
|------------------|-----------------|
| a) Encapsulation | b) Abstraction |
| c) Inheritance | d) Polymorphism |

(viii) Which function is used to take input from the user in Python?

- | | |
|-----------|------------|
| a) get() | b) input() |
| c) read() | d) scan() |

- (ix) Which statement is used to import an entire module?
- a) include b) import
c) require d) using
- (x) Which statement most suitably describes the combined use of NumPy, Pandas, and SciPy?
- a) Web development tools b) Game development libraries
c) Data analysis and scientific computing tools d) GUI libraries

Group-B

(Short Answer Type Questions)

$$3 \times 5 = 15$$

2. Explain strings in Python and common string operations. (3)
3. Explain nested if and if-elif-else ladder with suitable explanation. (3)
4. Write and explain a Python program to find the sum of first n natural numbers using while loop. (3)
5. Explain polymorphism in Python. (3)
6. Write a Python program demonstrating inheritance. (3)

OR

Write a Python program to create a class and object. (3)

Group-C

(Long Answer Type Questions)

$$5 \times 3 = 15$$

7. Write and explain a Python program to count even and odd numbers in a list. (5)
8. Explain string formatting techniques in Python. (5)
9. Explain how to handle missing data in Pandas and give an example. (5)

OR

Write a Python program to perform matrix multiplication using NumPy. (5)

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