



201  
CSE/IT/CEA/CE

## Jharkhand University of Technology, Ranchi

### Diploma 2nd Semester Examination, 2024 (NEP)

Subject : Python Programming

Subject Code : CSE201

Time Allowed : 3 Hours

Full Marks : 70

*Answer in your own words.*

*Answer any five questions.*

*Question No. 1 is compulsory, and from rest of the questions answer any four only.*

*All questions carry equal marks.*

1. Objective type questions pick the right options:

2×7=14

- (i) Which of the following is the correct extension for a Python file?
- (a) .pyth (b) .pt  
(c) .py (d) .p
- (ii) How do you insert comments in Python code?
- (a) //This is a comment (b) #This is a comment  
(c) /\*This is a comment\*/ (d) --This is a comment
- (iii) What is the output of the following code?  
`print(2**3)`
- (a) 6 (b) 8  
(c) 9 (d) 5
- (iv) Which of the following is used to create an empty set in Python?
- (a) {} (b) set()  
(c) [] (d) set[ ]
- (v) Which of the following is the correct way to define a list in Python?
- (a) list = [1, 2, 3, 4] (b) list = {1, 2, 3, 4}  
(c) list = (1, 2, 3, 4) (d) list = <1, 2, 3, 4>
- (vi) Which of the following is used to define a block of code in Python?
- (a) Brackets {} (b) Parentheses ()  
(c) Indentation (d) Commas ,
- (vii) Which of the following statements is true about tuples in Python?
- (a) Tuples are mutable  
(b) Tuples are immutable  
(c) Tuples are created using square brackets []  
(d) Tuples can have only one element

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Please Turn Over

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2. (a) Define character set in Python. What is Token? Discuss briefly the types of token in Python. 7  
(b) What is variable? Explain the type of variable initialization in python with example. 7
3. (a) How many types of data structures are there in python? Explain briefly. Explain how Slicing are performed in the python list data structure. 7  
(b) Discuss different flow control statements in python. Explain **if-else** and **if-elif** statement with suitable example. 7
4. (a) Give introduction of **NumPy** module. Explain the **NumPy** statistical functions with example. 7  
(b) What is a **function** in Python? How do you define a function in Python? Write a function in python to print the factorial of the number. 7
5. (a) What is the purpose of the **array** module in Python? How do you create an **array** of integers using the **array** module in Python? 7  
(b) Write a program in python to accept a number from user and check whether it is prime number or not. 7
6. (a) Why modules are used in python? Explain how the modules are created and import in python. 7  
(b) Discuss types of Error in python program. What is Exception Handling? Discuss how to each exceptions in python. 7
7. Write a short notes on *any four* of the following: 3-5×4=14
  - (a) Types of loop
  - (b) Indentation
  - (c) Comments
  - (d) Mutable data type
  - (e) Typecasting

