

**A**

Reg. No. :

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**Question Paper Code: U3828**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2023

Third Semester

Electronics and Communication Engineering

21UIT328 - FUNDAMENTALS OF PYTHON PROGRAMMING  
(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Which of the following loops is used for iterating over a sequence (such as a list) in Python? CO1- U  
(a) for loop                      (b) while loop                      (c) repeat loop                      (d) do-while loop
- What will be the output of the following Python statement? "a"+"bc" CO1- U  
(a) bc                      (b) abc                      (c) a                      (d) bca
- Which of the following refers to mathematical function? CO1- U  
(a) sqrt                      (b) rhombus                      (c) add                      (d) avg
- What will be the output of the following Python expression? CO1- U  
round(4.576)  
(a) 4.5                      (b) 5                      (c) 4                      (d) 4.6
- Which of the following is a Python tuple? CO1- U  
(a) [1,2,3]                      (b) (1,2,3)                      (c) {1,2,3}                      (d) {}
- What will be the output of the following Python code? CO1- U  
>>>t1 = (1, 2, 4, 3)  
>>>t2 = (1, 2, 3, 4)  
>>>t1 < t2  
(a) True                      (b) False                      (c) Error                      (d) None of these
- In which year was the Python language developed? CO1- U  
(a) 1995                      (b) 1972                      (c) 1981                      (d) 1989
- What will the following code print? print("Hello, " + "world!") CO1- U  
(a) Hello, world!                      (b) Hello + world!                      (c) "Hello, world!"                      (d) Error

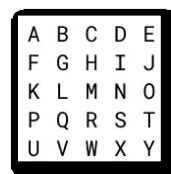
9. Which are the advantages of functions in python? CO1- U  
 (a) Reducing duplication of code    (b) Decomposing complex problems into simpler pieces  
 (c) Improving clarity of the code    (d) All the above
10. To which of the following the “in” operator can be used to check if an item is in it? CO1- U  
 (a) Lists                                    (b) Dictionary                            (c) Tuples                                    (d) All of the above

PART – B (5 x 2= 10 Marks)

11. Write a python coding to find the sum of n natural numbers CO2 - App
12. Write the syntax and usage of for loop CO1 - U
13. What is meant by module in python? List some built in modules in python CO1 - U
14. Explain how to create a dictionary in python? CO1 - U
15. Write a python code snippet to add a new key-value pair to a dictionary. CO2 - App

PART – C (5 x 16= 80 Marks)

16. (a) Explain in detail about the looping statements in python with suitable examples. CO1 - U    (16)
- Or
- (b) Explain in detail about the various data types and operators in python with suitable examples. CO1 - U    (16)
17. (a) Write a python code for the below scenario and explain the scenario with suitable syntax & flowchart. CO2-App    (16)  
 Grade Classification: If the score is 90 or greater, it's an "A.", If the score is between 90 and 80, it's a "B.", If the score is between 80 and 70, it's a "C.", If the score is between 70 and 60, and it's a "D." If the score is below 50, it's an "F."
- Or
- (b) Write a python program for the below patterns and also explain its iteration in detail using a flowchart. CO2- App    (16)



18. (a) What is modules and package? Explain about modules and package with example? CO1 - U (16)
- Or
- (b) Explain in detail about the types of functions with suitable examples and explain their iterations using a flowchart. CO1 - U (16)
19. (a) Define tuples in python. How are tuples different from lists? Give an example of a tuple and explain why they are immutable. CO1 - U (16)
- Or
- (b) Explain the concept of lists in python. Provide an example and describe three operations that can be performed on lists. CO1 - U (16)
20. (a) Write a python program using dictionary operation for the below scenario: A university wishes to create and maintain the details of the students such as Rollno, Register no, Name, Department, Batch, Contact no, nativity (Indian/NRI) as key value pairs. Display the complete student details by giving
- (i) Rollno as input.
  - (ii) Whose nativity belongs to NRI and
  - (iii) Whose department is IT?
- Or
- (b) Write a python program using string methods and string operations for the below scenario
- (i) Give a user name and concatenate the first and last names.
  - (ii) len()
  - (iii) Slice the message / input given
  - (iv) Various string methods like strip(), upper(), lower(), startswith(), endswith(), and replace() should be used.

