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**Question Paper Code: R2806**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Second Semester

Information technology

R21UIT206 PROGRAMMING FUNDAMENTALS USING PYTHON

(Common to CSE,CSD,CSE(AI&ML),Cyber Security & IOT Engineering)

(Regulations R2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is the key feature of Python that makes it a high-level programming language? CO1-U
2. Differentiate between local and global variables in Python. CO1-U
3. Mention the features of lists in python CO1-U
4. Write a program to remove duplicates from a list using a set. CO2-App
5. What is a function? Mention the type of function and use. CO1-U
6. Describe the difference between a function definition and a function call. CO1-U
7. Explain about string slicing with examples. CO1-U
8. Describe the purpose of the strftime() method in the datetime module. CO1-U
9. List some few common Exception types and explain when they occur. CO1-U
10. Explain the purpose of the map() and filter() functions. How do they differ, and when would you use each? CO1-U

PART – B (5 x 16= 80Marks)

11. (a) Explain in detail about the operators in Python with suitable examples. CO1-U (16)

Or

- (b) Explain in detail about the decision making constructs in Python with suitable examples. CO1-U (16)

12. (a) What are the basic list operations that can be performed in Python? CO1-U (16)  
Explain each operation with its syntax and example.
- Or
- (b) What is Dictionary? Explain Python dictionaries in detail CO1-U (16)  
discussing its operations and methods.
13. (a) Define a function in Python and explain its basic structure. Provide CO1-U (16)  
an example of a simple function and describe its components.
- Or
- (b) Explain the different types of function arguments in python with CO1-U (16)  
suitable examples.
14. (a) Explain in detail about the different string methods with suitable CO1-U (16)  
examples.
- Or
- (b) What is the CSV module in Python used for? Provide an example CO1-U (16)  
of how to write data to a CSV file. Explain the significance of the  
csv.reader() and csv.writer() objects in the CSV module.
15. (a) Describe about Handling Exceptions in detail with examples. CO1-U (16)
- Or
- (b) Explain in detail about Python Files, its types, functions and CO1-U (16)  
operations performed on files with examples.