

**2024/TDC (CBCS)/EVEN/SEM/
CSCSEC-401T/138**

TDC (CBCS) Even Semester Exam., 2024

COMPUTER SCIENCE

(4th Semester)

Course No. : CSCSEC-401T

(Python Programming)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—I

1. Answer any three of the following : 1×3=3

- (a) What is Python?
- (b) What can Python do?
- (c) What is decision table?
- (d) What is the concept of problem solving?

2. Answer any one of the following : 2

- (a) What is the basic structure of a Python program? Give example.

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(Turn Over)



(2)

(b) Write down the difference among syntax error, semantic error and linker error.

3. What is structured programming approach? Write down the advantages and disadvantages of structured programming approach. 1+4=5

OR

4. Define programming methodology. Explain different types of programming methodologies. 1+4=5

UNIT—II

5. Answer any *three* of the following : 1×3=3

- (a) What is Python shell?
(b) What is indentation in Python?
(c) What are literals in Python?
(d) Write the output of the following :

```
a=10
num=int(input("Enter a number:"))
add=a+1
print(add)
```

6. Answer any *one* of the following : 2

- (a) What is arithmetic operator? Give example.

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(Continued)

(3)

(b) What are increment and decrement operators? Give example.

7. What are strings in Python? How are they declared, accessed and traversed in Python? 1+4=5

OR

8. Write a calculator program using Python. 5

UNIT—III

9. Answer any *three* of the following : 1×3=3

- (a) How to write input and output statements in Python?
(b) What is exit function in Python?
(c) How do you define a function in Python?
(d) What will be the output of the following program, if the value stored in variable x is 12?

```
if x%2==2 :
print('x is even')
else :
print('x is odd')
```

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(4)

10. Answer any one of the following : 2

- (a) What is the difference between for loop and while loop? Give example.
- (b) What are default arguments? Give example.

11. Explain errors and exceptions in Python. 5

OR

12. Explain with example the difference among break, continue and pass statements in Python.

UNIT—IV

13. Answer any three of the following : 1×3=3

- (a) What is recursion?
- (b) What is conditional execution?
- (c) What is alternative execution?
- (d) Write the output of the following :

```
str='Hello World!'  
print(str)  
print(str*2)
```

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(Continued)

(5)

14. Answer any one of the following : 2

- (a) Give a brief description of nested conditionals.
- (b) How is return statement used in Python? Give example.

15. Write a Python program to print factorial of a number using recursion. 5

OR

16. Explain different methods used for list operations.

UNIT—V

17. Answer any three of the following : 1×3=3

- (a) What is OOP?
- (b) How do you define a class in Python?
- (c) How do you initialize an object?
- (d) How do you access attributes of a class?

18. Answer any one of the following : 2

- (a) What is array? What are the basic operations supported by an array?
- (b) What are the differences between stack and queue?

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(6)

19. Write a Python program to implement binary search.

5

OR

20. Using Python, write a program to implement selection sort.

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