

IEC College of Engineering and Technology, Greater Noida

Department of CSE/IT

Even Sem., Session 2022-23

Assignment-5

Submission Date: DD/MM/YY

Subject Name with Code: Python Programming (KNC-402)

Note- Attempt all questions

1. How do you perform a search in Python?
2. Solve the Tower of Hanoi problem for n= 3 disk and show all the steps.
3. Write a program in Python to execute the Selection sort algorithm.
4. Write a Recursive function in python BinarySearch(Arr,l,R,X) to search the given element X to be searched from the List Arr having R elements, where l represent slower bound and R represents the upper bound.
5. Explain the terms Merge List and Merge Sort in Python Programming.
6. Define Floor division with example.
7. Explain iterator. Write a program to demonstrate the tower of Hanoi using function.
8. Discuss and Differentiate Iterators and Recursion. Write a program for Recursive Fibonacci series.
9. Discuss Sorting and Merging. Explain different types of sorting with example. Write a Python program for Sieve of Eratosthenes.
10. What is the use of “raise” statement? Describe with an example.
11. Explain the use of “with” construct in Python with an example program.
12. How do you read an input from a user in Python to be used as an integer in the rest of the program? Explain with an example.
13. What is the output of the following program?
`(lambda x,y : y - 2*x) (1, 11)`
14. Explain the use of It function in a class Python?
15. Write a Python function removekth(s, k) that takes as input a string s and an integer $k \geq 0$ and removes the character at index k. If k is beyond the length of s, the whole of s is returned. For example,
removekth(“PYTHON”, 1) returns “PTHON”
removekth(“PYTHON”, 3) returns “PYTON”
removekth(“PYTHON”, 0) returns “YTHON”
removekth(“PYTHON”, 20) returns “PYTHON”

16. Describe the differences between a linear search and a binary search?
17. How can you create Python file that can be imported as a library as well as run as a standalone script?
18. Describe the difference between *import library* and *from library import ** when used in a python program. Here library is some python library.
19. Implement the binary search technique.
20. What do you mean by recursion? Write a recursive function to compute the factorial of an input number N.
21. Implement selection sort using Python.