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Hi-Tech Institute of Engineering & Technology
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
MODEL TEST PAPER
PYTHON PROGRAMMING

Time: 3 Hours

Total Marks: 70

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief. 2 x 7 = 14

a.	Define floor division with an example.
b.	How do you need an input from a user in Python to be used as an integer in the rest of the program? Explain with an example
c.	What Will be the output of the following Python code? def cube(x): return x * x * x x = cube(3) print x
d.	What are local variables and global variables in python
e.	Discuss various file opening modes of python.
f.	Show the way to import the module in Python.
g.	Explain the programming cycle for python in details.

SECTION B

2. Attempt any three of the following: 7 x 3 = 21

a.	What is short circuit evaluation ? What is printed by the following Python program ? a=0 b=2 c=3 x=c or a print(x)
b.	Explain the following loops with a flow diagram, syntax, and suitable examples. i. For ii. While iii. Nested For
c.	Write a program factors (N) that returns a list of all positive divisors of N (N >=1).For Example factor (6) returns [1,2,3,6] factors (1) returns [1] factors (13) returns [1,13]
d.	What are the different file access modes in python?
e.	How to create and import a module in Python?

SECTION C

3. Attempt any one part of the following: 7 x 1 = 7

(a)	Discuss various categories of operators in python. Find and explain stepwise solution of following expressions if a=3, b=5, c=10. i. a & b < 2/5**2+c^b ii. b>>a**2>>b**2^c**3.
(b)	What do you mean by operator precedence and associativity? Explain.

4. Attempt any *one* part of the following:

(a)	Explain all the conditional statement in Python using small code example.
(b)	Write a program to check the largest among the given three numbers.

5. Attempt any *one* part of the following:

7 x 1 = 7

(a)	Describe the difference between import library and from import library* when used in a Python program. Here library is some Python library
(b)	What is TKinter and why it is used in Python programming

6. Attempt any *one* part of the following:

7 x 1 = 7

(a)	Write a python program to find permutations of a given string.
(b)	Write a python program to count the vowels present in given input string. Explain the output of program through example.

7. Attempt any *one* part of the following:

7 x 1 = 7

(a)	There is a file named input.txt. Enter some positive numbers into the file named input.txt. Read the content of the file and if it is an odd number write it to odd..txt and if the number is even, write it to even.txt.
(b)	What is the purpose of read(), readline() and readlines() function. How does it operate?