JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATION- OCTOBER 2018
B-Tech VII SEM

COURSE NAME: PYTHON PROGRAMMING   MAX. MARKS: 25
COURSE CODE: 18B1WCI731
COURSE CREDITS: 3   MAX. TIME: 1.5 Hour

Note: *All questions are compulsory. Carrying of a mobile phone during examinations will be treated as a case of unfair means.*

Question 1:

Write a program to perform the following operation on a file (abc.txt)

1. To check if a file is closed or not (o/p: Print True or False)).   [2 Marks]
2. To read a random line from a file (use random function).   [2 Marks]
3. To count the number of lines in a text file.   [2 Marks]

Question 2:

Create a Time class and initialize it with hours and minutes.

1. Use constructor   [1 Marks]
2. Make a method addTime which should take two time object and add them. E.g.- (2 hour and 50 min)+(1 hr and 20 min) is (4 hr and 10 min).   [2 Marks]
3. Make a method displayTime which should print the time.   [1 Marks]
4. Make a method DisplayMinute which should display the total minutes in the Time. E.g.- (1 hr 2 min) should display 62 minute.   [1 Marks]

Question 3:

a) List any four Exception Errors, write the syntax for try-except   [2 Marks]
b) Write a python program of dividing 2 numbers (integer). Define a function divide to take the input(x,y) and use exception handling if i) divided by 0 and ii) string as input.
   [3 Marks]

Question 4:

Explain the working of heap sort (with the help of a diagram), write a python program for heap sort, write its space and time complexity.   [2+2+2 Marks]

Question 5:

Write a python program to transpose a matrix (NxN) using only loops [you are not allowed to not use any extra space (use input matrix to store the output)].   [3 Marks]