## II B. TECH II SEMESTER REGULAR EXAMINATIONS, AUG/SEPT 2021 PYTHON PROGRAMMING

(Mechanical Engineering)
Time: 3 hours

Max. Marks: 60

## Note: Answer ONE question from each Unit (5 $\times \mathbf{1 2}=\mathbf{6 0}$ Marks)

UNIT - I

1. a) Write a Program to read the radius of circle and print the area of circle.
b) Write a Program to initialize a string "hello world" to a variable str1 and convert [6M] the string to upper case.
(OR)
2. a) Write a program to read a four-digit number from the keyboard and calculate the [6M] sum of its digits.
b) Explain about bitwise and relational operators in python.

UNIT - II
3. a) Write a program in terms of if-else statement in python:

If temperature greater than 50 then temperature is hot, otherwise temperature is cold.
b) Illustrate nested if statement with suitable example.
(OR)
4. a) When is the break statement used in python?
b) When the continue statement is used in python?

UNIT - III
5. a) Differentiate between user defined and library defined functions?
b) What is the use of a return statement in python, explain with simple program?
(OR)
6. a) What are the advantages of functions?
b) What are arguments? Explain how the arguments passed to a function with a [6M] simple program.
UNIT -IV
7. a) State the syntax to define a class?
b) How are attributes added to class, show with a simple python program?
(OR)
8. a) What is self parameter and list its uses?
b) What can be done with overriding a method, show with a small program?

UNIT -V
9. a) Differentiate between error and exception? How to handle exceptions in python? [6M]
b) Define NumPy array? List the advantages of NumPy array over nested lists?
10. a) Explain about try expect block in python?
b) Explain user defined exceptions in python?

