



R20 Regulation

Subject code: 3P5GB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech V Semester Regular Examinations, January 2023

PYTHON PROGRAMMING

(CSE(AI & ML))

Maximum Marks: 70

Date: 09.01.2023

Duration: 3 Hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10 X 2 Marks=20 Marks)

- 1 Give the features of Python.
- 2 What are keywords? Give Examples.
- 3 Compare between == and = operators with examples.
- 4 What operators does python support?
- 5 What is function? Mention the type of function and use.
- 6 Define scope of variable in Python with example.
- 7 How to open a new file in Python? Give Syntax.
- 8 How to use NumPy in Python?
- 9 What are the three types of constructor?
- 10 What is the difference between an error and exception in Python?

Part-B

Answer All the following questions.

(5 X 10 Marks=50 Marks)

- 11 a) Write a Python program to find smallest number among three. [5m]
b) Explain about identity operators and operator precedence and associativity with example. [5m]

OR

- 12 a) Explain the data types in python. [5m]
b) Write the python programs to 'Test whether a given year is leap year or not'. [5m]

- 13 a) Write a python program to check whether a given number is palindrome or not. [5m]
b) Explain nested -if statement with example. [5m]

OR

- 14 a) Write a Python program to print all prime numbers less than 256. [5m]
b) List and explain different arithmetic operators supported by Python. [5m]

- 15 a) What is indexing and negative indexing in Tuple? [5m]
b) How lists are updated in Python explain. [5m]

OR

- 16 a) Give a comparison between lists, tuples, dictionaries and sets. [5m]
b) Write a Python program that interchanges the first and last characters of a given string. [5m]

17 a) List features that make NumPy unique? [5m]

b) How can you reshape NumPy array? [5m]

OR

18 a) What will be the output produced by the following programming statements 1 & 2? [5m]

```
import pandas as pd
S1=pd.Series(data=[31,41,51])
print(S1>40) -->Statement1
print(S1[S1>40]) -->Statement2
```

b) Why should we use Django? Explain. [5m]

19 a) Write a function called oops that explicitly raises a IndexError exception when called. Then write another function that calls oops inside a try/except statement to catch the error. What happens if you change oops to raise KeyError instead of IndexError? Where do the names KeyError and IndexError come from? [5m]

b) How to create, raise and handle user defined exceptions in Python. [5m]

OR

20 a) Write about Errors and Exception Handling in Python programming? [5m]

b) How to declare a constructor method in Python? Explain. [5m]