

22616

23242

3 Hours / 70 Marks

Seat No.

--	--	--	--	--	--	--	--

- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: **10****
- a) Enlist any four data structures used in python.
 - b) Give membership operators in python.
 - c) Write syntax for a method to sort a list.
 - d) Write use of matplotlib package in python.
 - e) What is data obstruction and data hiding.
 - f) Write the syntax of fopen.
 - g) What is dictionary?

P.T.O.

2. Attempt any THREE of the following:**12**

- a) Explain with example:
- i) Indentation
 - ii) Variables
- b) Print the following pattern using loop:

```
1 0 1 0 1 0 1
  1 0 1 0 1
    1 0 1
      1
```

- c) Write python program to perform following operations on set.
- i) Create set of five elements
 - ii) Access set elements
 - iii) Update set by adding one element
 - iv) Remove one element from set.
- d) Describe following Standard Packages
- i) Numpy
 - ii) Pandas

3. Attempt any THREE of the following:**12**

- a) What is the output of the following program?
- ```
dict1 = {'Google' : 1, 'Facebook' : 2, 'Microsoft' : 3}
dict2 = {'GFG' : 1, 'Microsoft' : 2, 'Youtube' : 3}
dict1.update(dict2);
for key, values in dict1.items():
 print (key, values)
```
- b) Write a python program that takes a number and checks whether it is a palindrome.
- c) Write a python program to create a user defined module that will ask your program name and display the name of the program.
- d) List data types used in python. Explain any two with example.

- 4. Attempt any THREE of the following:** **12**
- a) Compare list and tuple (any four points).
  - b) Write a python program takes in a number and find the sum of digits in a number.
  - c) Write a program function that accepts a string and calculate the number of uppercase letters and lower case letters.
  - d) Write a python program to create class student with roll-no and display its contents.
  - e) Explain following functions with example:
    - i) The open( ) function
    - ii) The write( ) function
- 5. Attempt any TWO of the following:** **12**
- a) Write the output for the following if the variable course = "Python"  

```
>>> course [: 3]
>>> course [3 :]
>>> course [2 : 2]
>>> course [:]
>>> course [-1]
>>> course [1]
```
  - b) Write a python program to generate five random integers between 10 and 50 using numpy library.
  - c) Write a Python program to create a class 'Diploma' having a method 'getdiploma' that prints "I got a diploma". It has two subclasses namely 'CO' and 'IF' each having a method with the same name that prints "I am with CO diploma" and 'I am with IF diploma' respectively. Call the method by creating an object of each of the three classes.

22616

[ 4 ]

**Marks**

**6. Attempt any TWO of the following:**

**12**

- a) Explain multiple inheritance and write a python program to implement it.
  - b) Write a Python program to create user defined exception that will check whether the password is correct or not.
  - c) Describe various modes of file object. Explain any three in detail.
-