Name: …………………………………………………. Roll No.: …………………………………………..
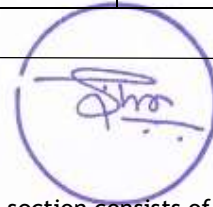
Branch: …………………………………………………. Signature of Invigilator: ……………………

Semester: IVth / VIth   Date: 01/05/2022 (MORNING)

Subject with Code: **IT271 INTRODUCTION TO PYTHON**

Marks Obtained	Section A (30)	Section B (20)	Total Marks (50)

INSTRUCTION TO CANDIDATE

1. The booklet (question paper cum answer sheet) consists of two sections. First section consists of MCQs of 30 marks. Candidates may mark the correct answer in the space provided / may also write answers in the answer sheet provided. The Second section of question paper consists of subjective questions of 20 marks. The candidates may write the answers for these questions in the answer sheets provided with the question booklet.

2. The booklet will be distributed to the candidates before 05 minutes of the examination. **Candidates should write their roll no. in each page of the booklet.**

3. Place the Student ID card, Registration Slip and No Dues Clearance (if applicable) on your desk. All the entries on the cover page must be filled at the specified space.

4. Carrying or using of mobile phone / any electronic gadgets (except regular scientific calculator)/chits are strictly prohibited inside the examination hall as it comes under the category of unfair means.

5. No candidate should be allowed to enter the examination hall later than 10 minutes after the commencement of examination. Candidates are not allowed to go out of the examination hall/room during the first 30 minutes and last 10 minutes of the examination.

6. Write on both side of the leaf and use pens with same ink.

7. The medium of examination is English. Answer book written in language other than English is liable to be rejected.

8. All attached sheets such as graph papers, drawing sheets etc. should be properly folded to the size of the answer book and tagged with the answer book by the candidate at least 05 minutes before the end of examination.

9. The door of examination hall will be closed 10 minutes before the end of examination. Do not leave the examination hall until the invigilators instruct you to do so.

10. Always maintain the highest level of integrity. Remember you are a BITian.

11. Candidates need to **submit the question paper cum answer sheets before leaving the examination hall**.

SET-1

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS:BE   SEMESTER : 4,6[th]
BRANCH:
ALL   SESSION : SP/22

SUBJECT: IT271 INTRODUCTION TO PYTHON

TIME:2
hour   **FULL MARKS: 50**

INSTRUCTIONS:
1. **The question paper contains 2 parts : PART-A 30 marks and PART-B 20 marks.**
2. **Candidates may attempt any 4 questions from PART-B.**
3. **Please write your question set number on the answer script before attempting question.**
4. **The missing data, if any, may be assumed suitably.**
5. **Before attempting the question paper, be sure that you have got the correct question paper.**
6. **Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.**

PART-A

Q1(i)   In a flowchart, an input or output instruction is represented by _____?   **(10x2=20)**
        (a) A diamond (b) Rectangle (c) Parallelogram (d) A circle

Q(ii).   What will be the output of below Python code?

```
str1="Application"
str2=str1.replace('a','A')
print(str2)
```
        (a) application (b) Application (c) ApplicAtion (d) applicAtion

Q(iii). What will be the output of below Python code?

```
str1="poWer"
str1.upper()
print(str1)
```
        (a) POWER (b) Power (c) power (d) poWer

Q(iv) Study the following program:

```
z = "xyz"
j = "j"
while j in z:
     print(j, end=" ")
```
        What will be the output of this code?
        (a)   xyz (b) no output (c) x y z (d) error

Q(v). What will be the output of the following code snippet?

```
a=[1,2,3]
a=tuple(a)
a[0]=2
print(a)
```
        (a) [2,2,3] (b) (2,2,3) (c) (1,2,3) (d) error

Q(vi). What will be the output of the following code snippet?
```
a=[1,2]
print(a*3)
```
(a) [3,6] (b) [1,2] (c) [1,2,1,2] (d) [1,2,1,2,1,2]

Q(vii). What will be the output of following:
```
def solve(a):
    a = [1, 3, 5]
a = [2, 4, 6]
print(a)
solve(a)
print(a)
```
(a) [2,4,6],[1,3,5] (b) [1,3,5],[1,3,5] (c) [2,4,6],[2,4,6] (d) None

Q(viii). What will be the output of the following code snippet?
```
def solve(a, b):
        return b if a == 0 else solve(b % a, a)
print(solve(20, 50))
```
(a) 10   (b) 20   (c)   50   (d)1

Q(ix). What will be the output of the following code snippet?
```
def check(a):
        print("Even" if a % 2 == 0 else "Odd")
check(12)
```
(a) Even (b) Odd (c) error (d) None

Q(x). What will be the type of the variable sorted_numbers in the below code snippet?
```
numbers = (4, 7, 19, 2, 89, 45, 72, 22)
sorted_numbers = sorted(numbers)
print(sorted_numbers)
```
(a) tuple   (b) List (c) string (d) int

Q2(i).   Arbitrary arguments have which symbol in the function definition before the parameter
     name?   **(10x1=10)**
     (a)   &   (b) #   (c) %   (d) *
 Q(ii).   Which statement invokes the function?
     (a) Function definition (b) Function call (c) Function header (d) None
Q(iii). The default access mode in file is :
     (a) r   (b) w   (c) rb   (d) wb
Q(iv). Which keyword is used to generate an exception?
     (a) throw   (b) raise (c) generate   (d) try
Q(v).   Which block is executed when no exception is raised from the try block?
     (a) try: (b) catch: (c) else: (d) except:
Q(vi). Which block can never be followed by an except block?
     (a) finally: (b) catch: (c) else: (d) except:
Q(vii).   Which of the following statements is correct regarding the object-oriented programming
     concept in Python?

(a) Classes are real-world entities while objects are not real   (b) Objects are real-world entities while classes are not real (c) Both objects and classes are real-world entities (d) All of the above

Q(viii).If a class has one class variable, then how many copies will be created for that variable?

(a) 0   (b) 1   (c) n   (d) infinite

Q(ix). What keyword is used in Python to raise exceptions?

(a) raise (b) try (c) goto (d) except

Q(x).   Which of the following are valid string manipulation functions in   Python?

(a) count() (b) upper() (c) strip (d) All of the above

PART-B   (4x5=20)

Note: Attempt any 4 questions.

Q3. Write an algorithm & Flowchart to find Roots of Quadratic Equations $Ax^2+Bx+c=0$.

Q4. Write a program to read two numbers. then find out whether the first number is a multiple of the second number.

Q5. Design a function for a string, return a string where for every character in the original there are three characters.

Ex: paper_doll('Hello') --> 'HHHeeellllllooo'

Q6. Write a short note on different methods to read data from a file.

Q7.   With the help of an example explain the significance of the __ init__() method.

:::::01/05/2022:::::