

# Exam Practice – Tutorial 01

## Question 1

a) You are to create a grading application. A student would take 3 subjects in a test ie. Maven, Python and C++. If the student has scored less than 30 for any of the subjects, he/she will fail the test. Otherwise, the student will be given a grade based on the average.

Average	Grade
$\leq 55$	S
$\leq 65$	C
$\geq 75$	D

b) Throw a invalid mark exception if the mark is greater than 100 or less than 0

(30 marks)

## Question 2

P1, P2, P5, P6, P8 can speak in English. P2, P3, P4, P7, P8 can speak in Sinhala. P1, P4, P8, P9 can speak in Tamil.

Write the code segment to

- a) Fetch the people who can speak all three languages.
- b) Show the number of people who can speak only English
- c) Fetch who can speak only Sinhala and Tamil but not English
- d) Show number of people who can speak at least one language

Q2(a) Write a program in python to find out greater of two numbers. 2

(b) Given the following code , write down what would be printed as output- 1

```
A=3
```

```
While(l in a):
```

```
Print ""Happy""**i
```

(c) Write pseudo-code / flowchart to input the year and to test and display whether the given year is leap year or not? 3

(d) Write python program to calculate area of circle. The radius being the input. 2

(e) Given the following python code what values are printed as output? 2

```
def afunc(B):
```

```
    B=B%2
```

```
    Print B
```

```
A=2
```

```
afunc(A)
```

```
afunc(A+5)
```

```
Print A
```

Q3: a) Is python a compiled or an interpreted language? 1

b) Differentiate between compiler and interpreter. 1

c) Write a short note on string constructs in python. 2

d) What are the benefits of using cloud computing (any two)? 2

e) List some common datatypes used in python. 1

1. Which of these is not a core data type?

- a) Lists
- b) Dictionary
- c) Tuples
- d) Class

2. Given a function that does not return any value, What value is thrown by default when executed in shell.

- a) int
- b) bool
- c) void
- d) None

3. Following set of commands are executed in shell, what will be the output?

```
>>>str="hello"
>>>str[:2]
>>>
```

- a) he
- b) lo
- c) olleh
- d) hello

4. Which of the following will run without errors?

- a) round(45.8)
- b) round(6352.898,2,5)
- c) round()
- d) round(7463.123,2,1)

5. What is the return type of function id ?

- a) int
- b) float
- c) bool
- d) dict

6. In python we do not specify types, it is directly interpreted by the compiler, so consider the following operation to be performed.

```
>>>x = 13 ? 2
```

objective is to make sure x has a integer value, select all that apply (python 3.xx)

- a) x = 13 // 2
- b) x = int(13 / 2)
- c) x = 13 % 2
- d) All of the mentioned

7. What error occurs when you execute?

```
apple = mango
```

- a) SyntaxError
- b) NameError
- c) ValueError
- d) TypeError

1. Which of the following is a Python tuple?

- a) [1, 2, 3].
- b) (1, 2, 3)
- c) {1, 2, 3}
- d) {}

2. Suppose t = (1, 2, 4, 3), which of the following is incorrect?

- a) print(t[3])
- b) t[3] = 45
- c) print(max(t))
- d) print(len(t))

3. What will be the output?

```
>>>t=(1,2,4,3)
```

```
>>>t[1:3]
```

- a) (1, 2)
- b) (1, 2, 4)
- c) (2, 4)
- d) (2, 4, 3)

4. What will be the output?

```
>>>t=(1,2,4,3)
```

```
>>>t[1:-1]
```

- a) (1, 2)
- b) (1, 2, 4)
- c) (2, 4)
- d) (2, 4, 3)

5. What will be the output?

```
>>>t = (1, 2, 4, 3, 8, 9)
```

```
>>>[t[i] for i in range(0, len(t), 2)]
```

- a) [2, 3, 9].
- b) [1, 2, 4, 3, 8, 9].
- c) [1, 4, 8].
- d) (1, 4, 8)

6. What will be the output?

```
d = {"john":40, "peter":45}
```

```
d["john"]
```

- a) 40
- b) 45
- c) "john"
- d) "peter"