JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATIONS-2022
B.Tech-III Semester (IT)

COURSE CODE (CREDITS): 18B11CI315 (3)   MAX. MARKS: 15

COURSE NAME: Python Programming with Raspberry Pi

COURSE INSTRUCTORS: Dr. Emjee Puthooran   MAX. TIME: 1 Hour

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1.(a) What are the features of Raspberry Pi ? What are the operating systems and programming languages available for Raspberry Pi?   [CO1, 2M]

(b) Briefly describe the real world advantages and the pedagogical advantages of Python language.   [CO2, 3M]

Q2.(a) What is the difference between the operators '==' and 'is' in Python? How does it affect when the variables are Python built-in data types and user defined data type?   [CO2, 2M]

(b) Find the output of the following Python code with a short explanation.   [CO2, 3M]

(i)

```
def f(x = 1, y = 2):
    x = x + y
    y += 1
    print(x, y)
f(y = 3, x = 2)
```

(ii)

```
def fn(x, y):
    k = 1
    y[1] = 4
t = 3
k = [1, 2, 3]
fn(t, k)
print(k[1], k[2])
```

(iii)

```
x = (x**2 for x in range(10))
y = next(x) + next(x)
print(y)
```

Q3. Define a class Tablet in Python that has attributes: model number, screen size in inches, and price. The class should have methods to enter and display the details of the Tablet. The class should throw an exception "TabletException" under the following conditions: (i) If more than 8 characters are entered for the model number (ii) If the screen size is smaller than 8 inches or greater than 12 inches (iii) If the price is negative or greater than Rs 1,00,000. Test your class by entering details of two Tablets and displaying them.   [CO2, 5M]