

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

B.Tech-III Semester (IT)

COURSE CODE (CREDITS): 18B11CI315 (3)

MAX. MARKS: 25

COURSE NAME: Python Programming with Raspberry Pi

COURSE INSTRUCTORS: Dr. Emjee Puthooran

MAX. TIME: 1 Hour and 30 Minutes

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

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Q1. What is socket and port in Networking? With a block diagram explain the client server architecture in computer network. [CO5, 5M]

Q2. Write a GUI application in Python which takes distance in inches and converts into centimeters and display. The application should have a button labeled as 'convert', which when clicked by the user, should display the distance in centimeter. (1 inch = 2.54 cm). Give appropriate comments for your program. [CO3, 5M]

Q3. Write a Python program to read a Digital image and transform to gray scale image and save the gray scale image. Give appropriate comments for your program. [CO6, 5M]

Q4. A minesweeper game features a grid of clickable squares, with hidden "mines" scattered throughout the board. The objective of the game is to clear the board without detonating any mines. Develop a minesweeper game with 5 by 5 grid in Python using the Pygame module. Give appropriate comments for your program. [CO4, 5M]

Q5.(a) What are Iterators and Generators in Python? Explain each with an example.

[CO2, 2M]

(b) Briefly explain about Lists, Tuples and Dictionaries used in Python, giving situation where each is used.

[CO2, 3M]

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