

Code No: 156FQ

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, March - 2024

PROGRAMMING LANGUAGES FOR IOT

(Computer Science and Engineering - IOT)

Time: 3 Hours

Max. Marks: 75

- Note:** i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A**(25 Marks)**

- 1.a) What is headless mode? [2]
- b) Write about control flow in Python. [3]
- c) What does MicroPython run on? [2]
- d) Describe running Python programs with the interpreter. [3]
- e) What are the types of IoT software architectures? [2]
- f) Mention benefits of IoT cloud. [3]
- g) What is Raspbian? [2]
- h) Write about Raspberry Pi software configuration tool. [3]
- i) Define USB scale. [2]
- j) Discuss about NetBeans in detail. [3]

PART – B**(50 Marks)**

- 2.a) Describe basic functionality of Raspberry Pi B+ board in detail.
 - b) Explain about Python function arguments with examples. [5+5]
- OR**
- 3.a) Discuss about Raspberry Pi without needing a GUI interface.
 - b) Give examples for Python string methods. [5+5]
- 4.a) Write code to turn on the four LEDs on the board in order.
 - b) Explain about Ada fruit Parts Pal kit in detail. [5+5]
- OR**
- 5.a) Discuss about starting the REPL Console (Windows).
 - b) Write code to flash the green LED when button is pushed. [5+5]
- 6.a) Explain about Web2py and Pyramid frameworks.
 - b) What are WAMP concepts? Explain. [5+5]
- OR**
- 7.a) Discuss about Xively cloud for IoT in detail.
 - b) Briefly explain about designing a RESTful Web API. [5+5]

8. Explain in detail about networking your Raspberry Pi. [10]

OR

9. Discuss about creating a simple Raspberry Pi application in detail. [10]

10. Explain the following:

- a) Communicating with a USB Scale
- b) Coffee Brewing Recipe.

[5+5]

OR

11. Explain the following:

- a) Asynchronous Communication
- b) Downloading and Configuring NetBeans.

[5+5]

---ooOoo---

Use of paper March-2024