

23U155S

(Pages: 2)

Name:

Reg. No.....

FIRST SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2023

(CUCBCSS-UG)

**CC18U SDC1 PP02 – PYTHON PROGRAMMING, BASIC ELECTRONICS,
INTRODUCTION TO IOT**

(Information Technology)

(2018 to 2020 Admissions – Supplementary)

Time: Three Hours

Maximum: 80 Marks

PART A

Answer *all* questions. Each question carries 1 mark.

1. A _____ diode would have zero forward resistance and zero forward voltage drop.
2. _____ and _____ are the two main categories of software.
3. A NOR gate is ON only when all it's inputs are _____.
4. _____ is an ordered sequence of finite, well-defined, unambiguous instructions for completing a task.
5. EEPROM stands for _____.
6. A _____ is a name that refers a value.
7. _____ ensures the reliable transmission of packets in-order.
8. A function written inside a class is called _____.
9. The _____ module in Python contains several functions which are useful to perform various mathematical calculations.
10. Write two types of files supported by Python.

(10 × 1 = 10 Marks)

PART B

Answer any *eight* questions. Each question carries 2 marks.

11. Define capacitor filter circuit
12. Write a short note on octal number system.
13. Write a short note on microprogrammed control.
14. Distinguish Self-Adapting and Self-Configuring features of IoT.
15. What is a cache memory?
16. Define the applications of IoT in home automation.
17. Differentiate Conditional execution and Alternative execution in Python.

18. What is secondary storage devices?
19. Define flowchart.
20. Define principle of duality.
21. Define nested conditionals.
22. Convert the following decimal number 1694 to binary number.

(8 × 2 = 16 Marks)

PART C

Answer any *six* questions. Each question carries 4 marks.

23. Differentiate NAND and NOR gates.
24. Explain Zener diode voltage regulators.
25. What are the applications of IoT for Retail?
26. Describe in detail two communication APIs in IoT.
27. What is an exception? Write a Python program to handle the Zero Division Error exception.
28. Explain mathematical and assignment operators in Python.
29. Write a program to find the given number is even or odd using python.
30. Give the differences between first generation computers and second generation computers.
31. Explain operations on string.

(6 × 4 = 24 Marks)

PART D

Answer any *two* questions. Each question carries 15 marks.

32. What is an operating system? Describe in detail the main functions of operating system?
33. What is a translator software? What are the different kinds of translator software?
34. Explain M2M architecture. What are the differences between M2M and IoT?
35. (a) What is a Dictionary? Explain different dictionary methods.
(b) Write a python program to retrieve keys, values and key-value pairs from a dictionary.

(2 × 15 = 30 Marks)
