19U156 (Pages: 2) Name: ……..……..

Reg. No…….

FIRST SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2019

(Regular/Supplementary/Improvement)

CC18U SDC1 PP02 – PYTHON PROGRAMMING, BASIC ELECTRONICS, INTRODUCTION TO IoT

(Information Technology - Core Course)

(2018 Admission onwards)

Time : Three Hours Maximum : 80 Marks

PART A

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

1. A set of programs and documents are collectively called_____
2. Constant resistance is also known as _____
3. A computer program that converts assembly language to machine language is _____
4. The computer accepts input data from user via an _____
5. If the information is not present in cache, then it is called a _____
6. A _____ is the smallest unit of representation of data in a computer.
7. ALU consists of the_____ unit and_____unit.
8. _____ is the circuit most frequently used for full-wave rectification.
9. _____ is a diagrammatic representation of the logic for solving a task.
10. Python provides the_____function that accepts data or input from the keyboard.

(10 x 1 = 10 Marks)

PART B

Answer any ***eight*** questions. 2 Marks for each question

11. What is a cache memory?
12. What are the functions of an operating system?
13. Explain about signed and unsigned numbers.
14. Define pseudo code.
15. Define the applications of IoT in logistics.
16. What is non-volatile memory?
17. What are logic gates?
18. Differentiate Type conversion and Type coercion.
19. Define nested conditionals.

20. Differentiate Function and Method.

21. Define algorithm.

22. What is python continue statement?

(8 x 2 = 16 Marks)

PART C

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

23. With the help of a neat diagram, explain the functional units of a computer.

24. Give the differences between third generation computer and fourth generation computers.

25. Find the decimal equivalent of following numbers:

    a) $(111.01)_2$ b) $(247.65)_8$

26. Give the differences between registers and cache memory.

27. List the key features of optical disk and floppy disk.

28. Define data types in Python.

29. What is ROM? Explain different types of ROM.

30. Give the difference between Compiler and interpreter.

31. Explain Zener diode voltage regulators.

(6 x 4 = 24 Marks)

PART D

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

32. (a) Explain with neat diagram the functional blocks of IoT.

    (b) Explain IoT communication Models.

33. Explain M2M architecture. What are the differences between M2M and IoT?

34. (a) Explain in detail the Python Object Oriented Principles.

    (b) What is Python Module? How it is loaded in the Python code?

35. (a) Explain common base characteristics.

    (b) Explain common emitter characteristics.

(2 x 15 = 30 Marks)

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