

D 73694

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Name.....

Reg. No.....

**FIRST SEMESTER B.TECH. (ENGINEERING) DEGREE [2019 SCHEME]
EXAMINATION, NOVEMBER 2019**

IT 19 100—INTRODUCTION TO COMPUTING AND PROBLEM SOLVING

Time : Three Hours

Maximum : 100 Marks

Part A

*Answer any ten questions.
Each question carries 5 marks.*

1. How to express algorithms ?
2. Differentiate between a microcomputer and a microprocessor.
3. List the characteristics of a computer.
4. Explain what do you mean by memory hierarchy ?
5. List the different type of storage devices.
6. What is the purpose of the main memory in a computer ?
7. Name and explain the various data type used in Python language.
8. Give the result of the following Python expressions :
 - (i) 273.
 - (ii) I = 2.
 - (iii) 3 in [2, 7, 5.3, 4, 12].
9. Differentiate between input{} and raw input{} functions in Python.
10. With suitable example discuss any two integer oriented function.
11. Illustrate fseek and ftell function.
12. What are the common uses of rewind and ftell function ?
13. Describe the use and limitations of the functions getc and putc.
14. What do you mean by dictionaries ? Give its operations.
15. Give a brief idea of classes and objects.

(10 × 5 = 50 marks)

Part B

*Answer section (a) or section (b) of each question.
Each question carries 10 marks.*

16. (a) What are the essential components of a computer ? With help of block diagram discuss the function of each component.

Or

- (b) What is the various computer generations ? Discuss main features of each generation with example.

Turn over

17. (a) Write an algorithm to insert n element from a linked queue depending upon users choice. Why do we have variety of memories in a computer system ?

Or

- (b) Define and explain with suitable example the term Macro. List the properties of application software.

18. (a) Write a Python program to add an element 5 to a list $x = [1, 2, 3]$ and to print that element.

Or

- (b) Write a program in Python to swap two numbers.

19. (a) Given any three numbers. Write a program to write their values in an ascending order.

Or

- (b) Write a program to illustrate the use of objects as arguments to member, and nonmember functions using Call By Value mechanism.

20. (a) Explain the four attributes of classes. Write down the general form of class definition.

Or

- (b) Write a program using a class to store price list of 50 items and to print the largest price as well as the sum of all prices.

(5 × 10 = 50 marks)