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INTERNATIONAL CENTRE FOR APPLIED SCIENCES

(Manipal University)

I SEMESTER B.S. DEGREE EXAMINATION – NOV. 2017

INTRODUCTION TO COMPUTERS & PROGRAMMING (CS 111)

Monday, 20 November 2017

Time: 3 Hours

Max. Marks: 100

- ✓ Answer ANY FIVE full Questions.
- ✓ Missing data, if any, may be suitably assumed

- 1A. Explain the System Unit with the help of a complete block diagram of a computer.
- 1B. Give any five differences between Compiler and Interpreter
- 1C. What are the desirable properties of an algorithm?
- 1D. . List out the different types of tokens available in C++? (5+5+5+5)
- 2A. Write a complete C++ program to find the largest of given 3 numbers.
- 2B. What are variables? What are the variable naming rules?
- 2C. With the help of Flow charts differentiate between entry controlled and exit controlled loops
- 2D. Differentiate between break and continue statements with the help of examples (5+5+5+5)
- 3A. Explain the following string handling functions with help of examples (i). strcmp() (ii)strcat()
- 3B. Write an employee structure to store employee number, name, and basic salary.
- 3C. Write a C++ program to read two matrices and display their product (6+4+10)
- 4A. What do you mean by actual and formal parameters with suitable examples
- 4B. Explain and show how each of the following 2D-Array is initialized?
- i. `int price[2][3]={ {1}, {1} };`
 - ii. `int table[3][3]={ {0}, {0}, {0} };`
- 4C. Write a program to sort a list of integers using Bubble sort
- 4D. Write a short note on structures and initialization of structures with the help of examples? (6+4+5+5)
- 5A. Define flowchart and draw a flowchart to check if a given year is a leap year or not
- 5B. Explain with the help of a program the address of operator, declaring and initialization of pointers
- 5C. Explain the following, with syntax and example for each: (5+5+10)
- 1) Enumerated Data type
 - 2) Typecasting

- 6A. Write a program to find smallest among three numbers using conditional operator.
- 6B. Write a complete C++ program to find all the roots of a quadratic equation using an else-if ladder.
- 6C. Write a C++ program to change all lowercase letters to uppercase and vice versa (5+10+5)
- 7A. Explain the storage classification of variables (Auto, Extern, Register, Static)
- 7B. i) Write a C++ code for function that returns multiple values and explain the same
ii) Differentiate between Call by value and Call by Reference
- 7C. What is the use of function overloading explain with the help of example
- 7D. Give a comparison of Linear Search. (5+6+4+5)
- 8A. Write a C++ program to copy a file to another file.
- 8B. Write Short notes on:
i) Data Abstraction
ii) Inheritance
iii) Polymorphism
- 8C. What are the benefits of OOP (List any 5). (6+9+5)

