INTERNATIONAL CENTRE FOR APPLIED SCIENCES
(Manipal University)
I SEMESTER B.S. DEGREE EXAMINATION – NOV. / DEC. 2016
SUBJECT: INTRODUCTION TO COMPUTERS & PROGRAMMING (CS 111)
(BRANCH: COMMEN TO ALL)
Tuesday, 13 December 2016

Time: 3 Hours   **Max. Marks: 100**

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

1A. Explain the types of computer memories.
1B. Draw a flowchart to convert binary number into decimal equivalent.

(12 + 8)

2A. Explain the built-in data types in C++.

2B. Write algorithm to find all types of root of a quadratic equation.

(10 + 10)

3A. Explain following:

   i) Symbolic Constant   ii) typedef

   iii) Reference Variable   iv) Conditional Operator

3B. Write a complete C++ program to find the largest number among N given numbers without
    using an array.

(10 + 10)

4A. Write a complete C++ program to find frequency of each digit in the given number using
    switch case.

4B. Explain the working of *else-if* statement with syntax and an example.

4C. Give the output and the reason of following clip of code

```
iNum = 3;
switch (iNum) {
          default:  cout<<"INVALID";
          case 1:  cout<<"ONE";
          case 2:  cout<<"TWO";
                    break;
          case 3:  cout<<"THREE";
     }
```

(10 + 6 + 4)

5A. What is a string? Write a C++ program to change all lowercase letters into uppercase and vice versa in a   sentence.

5B. Write a complete C++ program to read a list of integers into an array and reverse the array elements *without* using another array. It should not be a print effect and the array should actually be reversed. Display the array contents before and after reversing the array.

(10 + 10)

6A. Write a complete C++ program to multiply two Matrices and display the result in matrix format.

6B. Give snap shots of a binary search of 105 in the array having elements
58, 62, 75, 88, 92, 105.   **(10 + 10)**

7A. Explain the following with suitable examples.
   i) Function with no arguments/parameter but a return value
   ii) Function with arguments/parameter but No return values

7B.   Explain with an example, the Default Arguments to a function.

7C.   Write a function Rev() which returns the reverse of a given number. In the main() function, use Rev() function to check whether a number is palindrome or not.

(6 + 6 + 8)

8A.   List and explain any five benefits of Object Oriented Programming.

8B.   What is a C++ class? With the general syntax, explain declaration of a C++ class.

8C.   Write a C++ program to copy a file to another file.

(5 +5 + 10)

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