

2014

(Second Semester)

MASTER OF COMPUTER APPLICATIONS

Paper No: MCA 291

(Programming in C++ & Data Structure)

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks for the questions***I. Answer any two questions****15 x 2 = 30**

- a). Write a program that generates a random number from 0 through 9 and allows the user to guess the number. Display one of three messages depending on whether the guesser was exactly correct, within two of the random number, or off by more than two.
- b). Write the class definition for a Dateclass that contains three private integer datamembers: month, day, and year. Create a static member to hold a slash. Create two public member functions, setDate() and showDate(). You will use the static slash in the showDate() function. The setDate() function accepts three integer arguments and passes them on to three private functions, setMonth(), setDay(), and setYear(). If a month is greater than 12, then set it to 12. If a day is greater than 31, then set it to 31. Write a main() function that instantiates several objects of the Dateclass and tests the member functions.

- c). Write a program to evaluate the functions to 0.0001% accuracy.

$$\text{SUM}=1+(1/2)^2+(1/3)^3+(1/4)^4+\dots$$

II. Answer any one question:

10 x 1 = 10

- a). Write a program to demonstrate parameterized constructors.
- b). Write a program which use constructors in derived class.

III. Viva-voice

10

IV. Records

10

*****II/MCA/291*****