CS-74

BACHELOR OF COMPUTER APPLICATIONS
(BCA) (Pre-Revised)
Term-End Examination
June, 2016

□1ㄱ1⊑

CS-74 : INTRODUCTION TO INTERNET PROGRAMMING

Time : 2 hours   *Maximum Marks : 60*

Note : *Question number 1 is **compulsory**. Attempt any* ***three*** *questions from the rest. Use Java programming language in your answers.*

1. (a) What is inheritance ? How is inheritance implemented in Java ? Create a class named 'University' and create another class 'School' by extending the University class. "School" has attributes "discipline", "faculty", "programmes".   7

    (b) Write an Applet program which draws a circle inside a rectangle. Fill the circle with red colour.   5

    (c) What does the keyword 'Synchronize' mean in Java ? When do you use it ? What are the disadvantages of synchronization ?   5

(d) "Static function can only use static data of the class." Is this statement correct ? Explain your answer. **4**

(e) What is a final class ? Give two examples of final classes defined in Java API. **4**

(f) Write a program to pick out the second biggest number in an array of n integers. **5**

2. (a) What is a thread ? How do you implement threads in Java ? How do you stop a thread in Java ? Explain your answer with a Java program. **7**

(b) Give the usage of the three Java access specifiers with the complete Java declaration for each method. **3**

3. (a) How are packages imported in Java ? Explain the benefits of importing a package into your program. **5**

(b) What is meant by garbage collection ? How is it done in Java ? **5**

4. (a) What is a Built-in Exception ? Explain user-defined exceptions using a Java program fragment. **6**

(b) Write a Java program to read 10 names from the keyboard and sort them in alphabetical order. **4**

5. (a) What is an interface ? Can you extend an interface in Java ? Explain your answer with the help of a program fragment. 5

   (b) Explain the concept of method overloading and method overriding with examples. 5

———