

Roll No. ....

## BCA-502(N)

### B. C. A. (Fifth Semester) EXAMINATION, Dec., 2017

(New Course)

Paper Second

#### JAVA PROGRAMMING AND DYNAMIC WEB PAGE DESIGN

Time : Three Hours ] [ Maximum Marks : 75

**Note :** Attempt questions from all Sections as directed.

**Inst. :** The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

#### Section—A

##### (Short Answer Type Questions)

**Note :** All questions are compulsory. Each question carries 3 marks.

1. (A) Applets are considered safe to download and execute. How is this safety provided ?
- (B) Define encapsulation very clearly, giving a suitable example.
- (C) What are adapter class ? What convenience do they provide ?

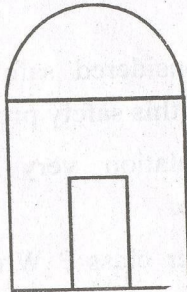
- (D) What are the steps required to execute a query in JDBC ?
- (E) What are the differences between an abstract class and an interface ?
- (F) What do you understand by meta tags ? Where are they positioned in an HTML page ? Explain the attributes it can include.
- (G) What is the difference in handling requests in HTTPServlet and generic servlets ? Explain giving example.
- (H) What are the elements of a JSP page ? Define the directive elements of a JSP page.
- (I) Differentiate between GET and POST requests of an HTTPServlet in detail.

### Section—B

#### (Long Answer Type Questions)

**Note :** Attempt any *two* questions. Each question carries 12 marks.

- 2. How to write custom exception in Java ? Explain clearly giving an example.
- 3. Create an applet, which draw the following figure :



4. Answer the following questions in brief :

- (a) Explain all the usages of final keyword
- (b) Differentiate between a thread and a process ? Why are the threads considered as light weight ?
- (c) Explain all the ways in which a connection object can be created.

### Section—C

#### (Long Answer Type Questions)

**Note :** Attempt any *two* questions. Each question carries 12 marks.

- 5. What are the various AWT controls ? Explain all of them in short.
- 6. Write a JSP page which calculates the sum of first five natural numbers, dynamically. Write a servlet that prints "Hello world."
- 7. Explain clearly the entire program and execution of this servlet, step by step.