

(Please write your Exam Roll No.)

Exam Roll No. 05714201011

**END TERM EXAMINATION**

FOURTH SEMESTER [BCA] MAY-JUNE-2013

Paper Code: BCA206

Subject: Java Programming (New)

Time : 3 Hours

Maximum Marks :75

Note: Attempt any five questions including Q.no.1 which is compulsory.  
Select one question from each unit.

- Q1 Explain any ten of the following briefly:- (2.5×10=25)
- What is the role of JRE?
  - What is the use of finalize() method?
  - What is constructor overloading?
  - What is the role of priority in multithreading programming?
  - What I/O classes can be used to take input from keyboard in java programs?
  - What is user defined exception? How is it created?
  - What is an inner class?
  - Write any five methods of Scrollbar class.
  - What is the use of AWT package?
  - Differentiate TCP and UDP.
  - What is the use of InetAddress class?
  - What is the DriverManager class in JDBC?

**UNIT - I**

- Q2
- Explain interface with example. Write down its advantages. (3)
  - What is array? Write syntax to create irregular two dimensional array? Give suitable example. (4)
  - Write a java application that takes an integer number as input from command line and computes the sum of digits and number of digits. (5.5)
- OR
- Q3
- What are the usages of "this" and "super" keywords? (3)
  - Explain Abstract class in java? What is the advantage of abstract class? Give suitable example? (6.5)
  - Explain instance variable hiding with suitable example. (3)

**UNIT - II**

- Q4
- Explain any 5 string methods with syntax. (5)
  - What is Exception? What is the difference between checked and unchecked exception? Write a program to demonstrate exception handling in java with example. (7.5)
- OR
- Q5
- Explain Thread life cycle. Write a program that have two threads where one thread print table of 5 and other thread print a string 10 times. (6.5)
  - What a note of byte stream I/O classes and character stream I/O classes in java. (6)

**UNIT - III**

- Q6
- Write an applet to create moving banner. (7.5)
  - What is Swing? Write down the features of swing. Compare applet and swing. (6)
- OR
- Q7
- Explain applet life cycle. Write an applet to change background color of applet using 3 scrollbars representing colors red, green and blue respectively. (7.5)
  - Explain Delegation Event Model in detail. Discuss any five events and listeners to handle those events. (5)

**UNIT - IV**

- Q8
- Write short notes on following:- (6)
    - InetAddress class and its factory methods
    - Servlet Life Cycle
  - Write a java application to connect to database table emp (id, name, design) and display all records of table. (6.5)
- OR
- Q9
- Write a Servlet to display the current date and time. (5)
  - What is JDBC? Explain all JDBC drivers and their features. What are the advantages of JDBC? (7.5)



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## END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY-JUNE 2014

Paper Code: BCA-206

Subject: Java Programming  
(2011 Onwards)

Time : 3 Hours

Maximum Marks: 75

Note: Attempt any five question, including Q.no.1 which is compulsory.

Select one question from each Unit.

- Q1
- (a) Which event is generated when a scrollbar is updated?
  - (b) How does Java ByteCode differ from other machine level codes?
  - (c) What is an adapter class?
  - (d) Which are the access specifiers available in Java?
  - (e) What is a reference variable?
  - (f) Can an applet class have a constructor? Justify your answer.
  - (g) What are the roles of Java compiler and interpreter?
  - (h) State the purpose of a static block.
  - (i) Why Java is called TypeSafe language as compared to C++?
  - (j) State the use of 'this' keyword.

(10x2.5=25)

### Unit-I

- Q2
- (a) What are abstract classes? How do they differ from concrete classes? Can an abstract class be instantiated? Can there be an abstract constructor. Explain your answer with suitable example. (6)
  - (b) What is a constructor? Does Java provide a default constructor? Does Java provide a default copy constructor? Explain your answer with suitable example. (6.5)

OR

- Q3
- (a) How is method overloading different from method overriding? Give suitable example. (5.5)
  - (b) What is the need of an interface in Java? (4)
  - (c) Discuss the usages of 'final' keyword. (3)

### Unit-II

- Q4
- (a) Compare String and StringBuffer classes with suitable examples. (3)
  - (b) Mention various states of a thread. Give their features. (4.5)
  - (c) Discuss the process of synchronization of threads with an example. (5)

OR

- Q5
- (a) Write a Java program to copy contents of one file to another file. (6.5)
  - (b) Differentiate between checked and unchecked exceptions. Write a program to create user-defined exception and use the same in the main program. (6)

### Unit-III

- Q6
- (a) What is delegation event model? Write a program to illustrate the keyboard OR mouse event handling. (8)
  - (b) Differentiate between Swings and AWT controls. (4.5)

OR

- Q7
- (a) Explain the life cycle of an applet. (5)
  - (b) Write a program to display a student's details such as name, roll number, marks etc. in an applet window. Provide these input details through html file. (7.5)

### Unit-IV

- Q8
- (a) What is JDBC? Discuss the general JDBC architecture. What are basic steps to create a JDBC application? (7)
  - (b) What are the different types of JDBC statement? (3)
  - (c) Write a short note on Client-Server applications in Java. (2.5)

OR

- Q9
- Write notes on the following:-
- (a) Java Servlets (3)
  - (b) InetAddress class (3)
  - (c) Byte and Character stream classes (3)
  - (d) Layout Manager. (3.5)

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# END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY-JUNE-2015

**Paper Code: BCA206**

**Subject: Java Programming  
(Batch: 2011 onwards)**

**Time : 3 Hours**

**Maximum Marks :75**

**Note: Attempt any five questions including Q.no.1 which is compulsory.**

- Q1 Differentiate between the following:- (provide an example to each subsection):- **(5x5=25)**
- (a) Super class and sub class
  - (b) Byte and character streams
  - (c) Check box and radio button
  - (d) Adapter class and inner class
  - (e) Java classes and Java Interfaces
- Q2 (a) What is a thread? Describe the complete life cycle of thread. Provide an example to create and execute the thread. **(6.5)**
- (b) State any six features of Java in detail. **(6)**
- Q3 Explain the following terms with respect to exception handling. Provide an example to demonstrate the following terms:- **(12.5)**
- (a) Try
  - (b) Catch
  - (c) Throw
  - (d) Finally
- Write a program which demonstrate how exceptions are implemented.
- Q4 (a) What is the difference between an argument and a parameter? Discuss with an example. **(6.5)**
- (b) What is polymorphism? Write a JAVA program that uses polymorphism. **(6)**
- Q5 What is Inheritance? With diagrammatic illustration and JAVA Program(s), illustrate types of inheritance. Give self explanatory comments in your program. **(12.5)**
- Q6 Define I/O stream, Write a java program to illustrate the use of I/O stream. **(12.5)**
- Q7 (a) How do applets differ from application programs? Explain with example? **(4)**
- (b) Distinguish between the following:- **(4)**
- (i) Input stream and Reader classes
  - (ii) Output stream and Write classes
- (c) Write a program to accept number from user and convert into binary by using wrapper class methods. **(4.5)**
- Q8 Write short notes on any two of the following:- **(6.25x2=12.5)**
- (a) Datagrams and TCP/IP based client and server socket
  - (b) Swings and comparison with AWT controls
  - (c) JDBC Architecture and JDBC Drivers

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# END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY-JUNE 2016

Paper Code: BCA-206

Time : 3 Hours

Subject: Java Programming

Maximum Marks :75

**Note: Attempt any five question including Q.No.1 which is compulsory.**

Q1

Answer the following questions:

(2.5x10=25)

- (a) How can we pass parameters to an applet?
- (b) What is the role of layout manager in AWT or swing?
- (c) Can applet class have a constructor? Justify your answer.
- (d) What is the purpose of the jar tool?
- (e) What is the difference between Integer and int?
- (f) Why is it illegal for static method to invoke a non-static method?
- (g) What do you understand by daemon thread.
- (h) State the uses of 'super' keyword with an example.
- (i) Write a note on inner classes.
- (j) What do you understand by garbage collection in java?

Q2

- (a) What is the difference between equality of objects and equality of references that refer to them? (6)
- (b) Write an application that computes the value of following expression 'exp' using the formula:  $exp = 1 + x/1! + x^2/2! + x^3/3! + \dots$  (6.5)

Q3

- (a) What is the role of priorities in multithreading. What are its limitations? Explain with the help of an example how to set and get priority values for threads in Java. (5)
- (b) What do you understand by inter-thread communication in java? (5)
- (c) What is the role of stack in exception handling? (2.5)

Q4

- (a) Write a java program to accept two file names as command line argument. Copy only those lines from the first file to second which contains the word 'computer'. (8)
- (b) Discuss in detail 'throw' and 'throws' keywords. (4.5)

Q5

- (a) Explain in brief Java's event handling mechanism with the help of an example. (5)
- (b) What is a container? Explain how components are added to a container. What is a default layout of an applet? How can you change it? (4.5)
- (c) List the methods under Window Listener Interface. (3)

Q6

- (a) Swing components are lightweight components. Comment. (4.5)
- (b) What is a String Buffer class and how does it differ from String class? (4)
- (c) Why do we need both run() and start() methods in multithreading? Can we achieve it with only run() method? Explain. (4)

Q7

- (a) Explain in detail various input and output streams and their corresponding classes in Java. (6.5)
- (b) Explain the life cycle of an applet. (6)

Q8

Write notes on the following:

- (a) Interfaces
- (b) Adapter classes
- (c) Life cycle of Java Servlet
- (d) Checked Exceptions

(3.5, 3, 3, 3)

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**END TERM EXAMINATION**

FOURTH SEMESTER [BCA] MAY 2017

**Paper Code: BCA-206****Subject: Java programming****Time: 3 Hours****Maximum Marks: 75****Note: Attempt any five questions including Q no.1 which is compulsory.**

- Q1 Answer the following:- (5x5=25)
- What is type casting? Illustrate with example what is meant by Automatic type promotion.
  - What is delegation event model?
  - Discuss the uses of 'throw' and 'throws' keywords.
  - Explain the different uses of 'super' keyword.
  - Explain the lifecycle of an applet.
- Q2
- Explain why the main function is declared as "public static void main (String args[])"? (4)
  - List and explain any 8 Java buzzwords. (4)
  - List and explain the OOP principles. (4.5)
- Q3
- Explain the concept of abstract classes in Java. (6)
  - What is a Package? Discuss with suitable example the steps involved in creating and using packages. (6.5)
- Q4
- What are interfaces? What are their benefits? Give the general form of a class that implements interfaces. (6)
  - Write a Java class called as SavingsAccount with members as AccountNo and Balance. Provide depositAmount() & withdrawAmount() functions. If user tries to withdraw more money than his balance, then throw a User Defined Exception. (6.5)
- Q5
- Explain the different ways of creating threads in java with syntax. (6)
  - How shared object can be protected from multiple access of threads? (6.5)
- Q6
- Bring out the differences between AWT and Swings using suitable example. (6)
  - Discuss various layout managers available in AWT. (6.5)
- Q7
- Write a program to illustrate BufferedInputStream and BufferedOutputStream. (6)
  - Compare byte stream class and character stream class. (6.5)
- Q8 Write short notes on the following:-
- JDBC architecture (3)
  - Adapter classes (3)
  - Applets and comparison with application program (3)
  - Check box and choice list (3.5)

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## END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY 2018.

Paper Code: BCA-206

Subject: Java Programming

Time: 3 Hours

Maximum Marks: 75

Note: Attempt any five questions including Q.no.1 which is compulsory.

- Q1 Explain following in brief:- (Any five)- (5x5=25)
- (a) Explain in detail the features of Java.
  - (b) How a multidimensional array is represented in Java? Write the program to create a 2 \* 2 array.
  - (c) Differentiate between Socket and Port.
  - (d) How multithreading is achieved in Java programs. Discuss its advantages and disadvantages.
  - (e) Differentiate between Swings and Applets.
  - (f) How the constructor is overloaded in Java?
- Q2 (a) What is a private constructor? How we can create the object of the class having private constructor from other class. (6)
- (b) Explain the logical operator (& & and | |) with example. (6.5)
- Q3 (a) What is a constructor? Write the program to pass the values to the base class constructor from the sub class. (6)
- (b) Explain different access modifiers available in Java. (6.5)
- Q4 (a) Differentiate between checked and unchecked Exception. Give four examples of each type. (6)
- (b) Explain the life cycle of Thread. Describe any five methods from thread class. (6.5)
- Q5 (a) Write the program to count the number of words in file. (6)
- (b) Why String class objects are considered as immutable. Differentiate between length property and length() method with example. (6.5)
- Q6 (a) What is layout manager? Explain any three layout managers in Java. Which method is used to set the layout manager? (6)
- (b) Write a program to print the table of any number inside the applet. (6.5)
- Q7 (a) Explain the two predefined stream variables in and out. (6)
- (b) Differentiate between ODBC and JDBC. (6.5)
- Q8 (a) Explain the InetAddress class. Write the program to find the IP address of any website using the methods of InetAddress class. (6)
- (b) Explain client server communication using sockets. Discuss the use of Server Socket and Socket Class in Java. (6.5)

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# END TERM EXAMINATION

FOURTH SEMESTER [BCA] APRIL-MAY 2019

Paper Code: BCA-206

Subject: Java Programming

Time: 3 Hours

Maximum Marks :75

Note: Attempt any five questions including Q.no.1 which is compulsory.

(5x5=25)

- Q1 Answer **any five** the following:-
- (a) Discuss all the three usages of final keyword?
  - (b) How can we pass parameters to an applet?
  - (c) What is the difference between int and Integer?
  - (d) Differentiate between adapter and inner classes.
  - (e) What is DriverManager class in JDBC?
  - (f) What is the use of this and super keyword?
  - (g) What do you mean by Daemon thread? How can you set priority of a thread?
- Q2 (a) How is method overloading different from method overriding? Explain with the help of suitable code. (6)  
(b) What is a constructor? Does Java provide default constructor? Does Java provide a default copy constructor? Explain your answer with suitable example. (6.5)
- Q3 (a) What is inheritance? Explain different types of inheritance in Java with suitable diagram and small segment of codes. (6.5)  
(b) What are cookies? Are they good or bad? Justify. (6)
- Q4 (a) Explain the life cycle of a thread. Discuss the process of thread synchronization with the help of appropriate code. (6)  
(b) Explain any 5 String class methods in detail. (6.5)
- Q5 (a) Differentiate between checked and unchecked exceptions. Write a program to demonstrate the concept of user defined exceptions. (7.5)  
(b) Write a program to copy contents of one file to another. (5)
- Q6 (a) What is delegation event model? Write program to explain keyboard event handling. (7.5)  
(b) Differentiate between swing and AWT. (5)
- Q7 (a) Write a program to change background color of applet using three scrollbars representing red, green and blue? (7.5)  
(b) Write short notes on InetAddress class and its factory methods. (5)
- Q8 (a) What is JDBC? Explain all JDBC drivers in detail. (7.5)  
(b) Write a servlet to display current date and time. (5)

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