

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

END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY-JUNE 2016

Paper Code: BCA-206

Subject: Java Programming

Time : 3 Hours

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 orswing?
 - (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 work '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: (3.5, 3, 3, 3)
- (a) Interfaces
 - (b) Adapter classes
 - (c) Life cycle of Java Servlet
 - (d) Checked Exceptions

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)
- (a) What is type casting? Illustrate with example what is meant by Automatic type promotion. (4)
 - (b) What is delegation event model? (4)
 - (c) Discuss the uses of 'throw' and 'throws' keywords. (4.5)
 - (d) Explain the different uses of 'super' keyword. (4.5)
 - (e) Explain the lifecycle of an applet. (4.5)
- Q2 (a) Explain why the main function is declared as "public static void main (String args[])"? (4)
- (b) List and explain any 8 Java buzzwords. (4)
 - (c) List and explain the OOP principles. (4.5)
- Q3 (a) Explain the concept of abstract classes in Java. (6)
- (a) What is a Package? Discuss with suitable example the steps involved in creating and using packages. (6.5)
- Q4 (a) What are interfaces? What are their benefits? Give the general form of a class that implements interfaces. (6)
- (b) 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 (a) Explain the different ways of creating threads in java with syntax. (6)
- (b) How shared object can be protected from multiple access of threads? (6.5)
- Q6 (a) Bring out the differences between AWT and Swings using suitable example. (6)
- (b) Discus various layout managers available in AWT. (6.5)
- Q7 (a) Write a program to illustrate BufferedInputStream and BufferedOutputStream. (6)
- (b) Compare byte stream class and character stream class. (6.5)
- Q8 Write short notes on the following:-
- (a) JDBC architecture (3)
 - (b) Adapter classes (3)
 - (c) Applets and comparison with application program (3)
 - (d) Check box and choice list (3.5)

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)**

END TERM EXAMINATION

FOURTH SEMESTER [BCA] JULY 2023

Paper Code: BCA-202

Subject: Java Programming

(BATCH 2021 ONWARDS)

Time: 3 Hours

Maximum Marks: 75

Note: Attempt five questions in all including Q.No. 1 which is compulsory.

- Q1 Answer the following (2.5x10=25)
- a) Discuss three usage of final keywords.
 - b) Mention various states of thread. Give suitable example.
 - c) How the constructor is overloaded in Java?
 - d) How multithreading is achieved in Java. Explain its advantages and disadvantages.
 - e) Why Java is called type safe language as compared to C++.
 - f) What are the roles of Java compiler and interpreter?
 - g) Explain Why the main function is declared as "Public static void main (String args [])"?
 - h) How does java byte code differ from other machine level codes?
 - i) What is the use of this, final and super keyword in Java.
 - j) Discuss process of synchronization of a thread with suitable example.
- Q2
- a) What is constructor? Does Java provide default constructor? Explain your answer with suitable example. (8.5)
 - b) Explain in details the features of Java. (4)
- Q3
- a) Explain the concept of abstract classes in Java with suitable example. How abstract classes differ from interface. (9.5)
 - b) What are interfaces? What are their benefits? Give the general form of a class that implements interfaces. (3)
- Q4
- a) Explain different access modifiers available in Java. (6)
 - b) Differentiate between checked and unchecked exception. Write a program to illustrate user defined exception. (6.5)
- Q5
- a) Explain the life cycle of threads. Also explain different ways of creating threads in java. (6.5)
 - b) Write a program to print the table of any no. inside the applet. (6)
- Q6
- a) Discuss various Layout Managers available in AWT. (6.5)
 - b) Differentiate between Swing and AWT. (6)
- Q7
- a) How is method overloading different from method overriding? Give suitable example. (5)
 - b) Write **short notes** on the following: (7.5)
 - i) Adapter class
 - ii) Applet and application program
 - iii) Check box and choice list

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BCA-202
P/2

~~Q8~~

- a) What is JDBC? Explain all JDBC drivers in detail.
- b) Write short notes on Java Servlet.

(7.5)
(5)

~~Q9~~

- a) Explain the following term with respect to exception handling. (8.5)
 - i) Try
 - ii) Catch
 - iii) Finally
 - iv) Throw
- b) Differentiate between JDBC and ODBC. (4)
