ஸ்ரீ-ல-ஸ்ரீ காசிவாசி சுவாமிநாத சுவாமிகள் கலைக் கல்லூரி

திருப்பனந்தாள் – 612504

S.K.S.S ARTS COLLEGE, THIRUPPANANDAL - 612504

QUESTION BANK
Title of the Paper

PROGRAMMING IN JAVA

Course: II BCA
Sub. Code: 16SCCCA3
Semester: III

Prepared by

Mr. M. PARASURAMAN, MCA., M.Phil.,
Assistant Professor
Department of Computer Science

CORE COURSE III
PROGRAMMING IN JAVA

Unit I

Object Oriented Programming : Introduction to OOP – Objects and Classes – Characteristics of OOP – Difference between OOP and Procedure Oriented Language – Introduction to java Programming : Introduction – Features of Java – Comparing java and Other Languages – Applications and Applets – Java Development Kit – Complex Programs – Java Source File Structure – Prerequisites for Compiling and Running Java Programs

Unit II

Java Language Fundamentals : The Building Blocks of Java – Data Types – Variable Declarations – Wrapper Classes – Operations and Assignment – Control Structures – Arrays – Strings – StringBuffer Class

Unit III

Java as an OOP Language : Defining Classes – Modifiers – Packages - Interfaces

Unit IV

Exception Handling : Introduction – Basics of Exception Handling – Exception Hierarchy – Constructors and Methods in Throwable Class - Unchecked and Checked Exceptions – Handling Exceptions in Java – Exception and Inheritance – Throwing User-defined Exceptions – Redirecting and Rethrowing Exceptions – Advantages of Exception Handling Mechanism – Multithreading : Introduction – Creating Threads – Thread Life-cycle – Thread Priorities and Thread Scheduling – Thread Synchronization– Daemon Threads – Tread Groups – Communication of Threads

Unit V

Files and I/O Streams : Overview – Java I/O – File Streams – FileInputStream and FileOutputStream – File Streams – RandomAccess File – Serialization - Applets : Introduction – Java Applications versus Java Applets – Applet Life-cycle – Working with Applets – The HTML APPLET Tag – The java.Applet package

UNIT – I
Choose the Correct Answer

1. Which of the following is not OOPS concept in Java?
   a) Inheritance
   b) Encapsulation
   c) Polymorphism
   d) Compilation

2. Which of the following is a type of polymorphism in Java?
   a) Compile time polymorphism
   b) Execution time polymorphism
   c) Multiple polymorphism
   d) Multilevel polymorphism

3. When does method overloading is determined?
   a) At run time
   b) At compile time
   c) At coding time
   d) At execution time

4. Which component is used to compile, debug and execute java program?
   a) JVM
   b) JDK
   c) JIT
   d) JRE

5. Which component is responsible for converting bytecode into machine specific code?
   a) JVM
   b) JDK
   c) JIT
   d) JRE

6. Which statement is true about java?
   a) Platform independent programming language
   b) Platform dependent programming language
   c) Code dependent programming language
   d) Sequence dependent programming language

7. Which of the below is invalid identifier with the main method?
   a) public
   b) static
   c) private
   d) final

8. What is the extension of java code files?
   a) .class
   b) .java
   c) .txt
   d) .js

9. What is the extension of compiled java classes?
   a) .class
   b) .java
   c) .txt
   d) .js

10. How can we identify whether a compilation unit is class or interface from a .class file?
   a) Java source file header
   b) Extension of compilation unit
   c) We cannot differentiate between class and interface
   d) The class or interface name should be post fixed with unit type

Answers: 1.d   2. a   3.b   4. b   5. a   6. a   7. c   8. b   9. a   10. a

Short Questions (2 Marks)
11. Define method overloading
12. What is type casting in java?
13. Define tokens
14. What is a Data type?
15. What are the keywords in Java?
16. What are the features of Java?
17. Define constants
18. Define objects
19. Define polymorphism
20. Define Encapsulation

Paragraph Questions (5 Marks)

21. Explain about object oriented programming
22. Explain advantages of OOP
23. Explain the features of java
24. Difference between procedure oriented programming and object oriented Programming.
25. Differentiate Applications and Applet program
26. How to create and execute java program
27. Explain structure of a java program
28. Explain java development kit
29. Write the differences between java and c++
30. Briefly explain history of the development of java

Essay Type Questions (10 Marks)

31. Describe the fundamental concepts of objected oriented programming.
32. Discuss about the benefits of oops
33. Discuss in detail about classes and objects in java
34. Explain Encapsulation, Inheritance and Polymorphism
35. Describe the characteristics of object oriented programming concepts
36. Discuss the advantages and drawbacks of object oriented programming
37. Describe the buzzwords of java programming language

DEPARTMENT OF COMPUTER SCIENCE

38. Java is a pure object oriented programming language –explain
39. What is an oop? What is the difference between procedural language and oops?
40. Discuss the features of java in detail.

UNIT - II
Choose the Correct Answer

1. What is the range of short data type in Java?
    a) -128 to 127
    b) -32768 to 32767
    c) -2147483648 to 2147483647
    d) None of the mentioned

2. What is the range of byte data type in Java?
    a) -128 to 127
    b) -32768 to 32767
    c) -2147483648 to 2147483647
    d) None of the mentioned

3. Literal can be of which of these data types?
    a) integer
    b) float
    c) boolean
    d) all of the mentioned

4.   Which of these cannot be used for a variable name in Java?
    a) identifier
    b) keyword
    c) identifier & keyword
    d) none of the mentioned

5. Which of these is necessary condition for automatic type conversion in Java?
    a) The destination type is smaller than source type
    b) The destination type is larger than source type
    c) The destination type can be larger or smaller than source type
    d) None of the mentioned

6. Which of these operators is used to allocate memory to array variable in Java?
    a) malloc
    b) alloc
    c) new
    d) new malloc

7. Which of these is an incorrect array declaration?
    a) int arr[] = new int[5]
    b) int [] arr = new int[5]
    c) int arr[] = new int[5]
    d) int arr[] = int [5] new

8. Which of these is necessary to specify at time of array initialization?
    a) Row

b) Column
c) Both Row and Column
d) None of the mentioned

9. Which of these is returned by "greater than", "less than" and "equal to" operators?
a) Integers
b) Floating – point numbers
c) Boolean
d) None of the mentioned

10. The while loop repeats a set of code while the condition is not met?
a) True
b) False

Answers: 1. b   2. a   3. d   4. b   5. b   6. c   7. d   8. a   9. c   10.b

Short Questions (2 Marks)

11. Why java is platform independent?
12. Define identifier?
13. What is variable?
14. Define JVM?
15. What is the use of comma operator?
16. Define Arrays.
17. List out the different kinds of operators used in java.
18. Define break statemen.t
19. Define continue statement.
20. Define String.

Paragraph Questions (5 Marks)

21. Write short notes on data types and variables.
22. Explain ternary operator.
23. Differentiate While loop and Do While loop.
24. Explain simple if statement with suitable example.
25. Explain one dimensional arrays.
26. Describe various methods of the string class.
27. Explain StringBuffer class.
28. Explain For loop statement with example.
29. Explain Switch..Case statement with example.
30. Explain Bitwise operators in java.

Essay Type Questions (10 Marks)

31. What are various data types in Java? Explain them in detail
32. What are various operators in Java? Explain them in detail
33. Write a java program to perform relational operations using DataInputStream class.
34. Explain the various loop structures available in java
35. Explain the different control structures available in java

36. Discuss about the features of String Buffer class with example
37. Discuss about the building blocks of java
38. What are various methods of the string class in Java? Explain them in detail
39. Explain function overloading. Give an example. List out some of the standard overloaded methods
40. What is an Array? Explain various types array with an example.

UNIT –III
Choose the Correct Answer

1. Which of these keywords is used to make a class?
   a) class
   b) struct
   c) int
   d) none of the mentioned

2. Which of the following is a valid declaration of an object of class Box?
   a) Box obj = new Box();
   b) Box obj = new Box;
   c) obj = new Box();
   d) new Box obj;

3. Which of these operators is used to allocate memory for an object?
   a) malloc
   b) alloc
   c) new
   d) give

4. What is true about private constructor?
   a) Private constructor ensures only one instance of a class exist at any point of time
   b) Private constructor ensures multiple instances of a class exist at any point of time
   c) Private constructor eases the instantiation of a class
   d) Private constructor allows creating objects in other classes

5. What would be the behaviour if this() and super() used in a method?
   a) Runtime error
   b) Throws exception
   c) compile time error
   d) Runs successfully

6. Which of these keywords is used to define packages in Java?
   a) pkg
   b) Pkg
   c) package
   d) Package

7. Which of these is a mechanism for naming and visibility control of a class and its content?
   a) Object
   b) Packages
   c) Interfaces

d) None of the Mentioned.

8. Which of this access specifies can be used for a class so that its members can be accessed by a different class in the same package?
a) Public
b) Protected
c) No Modifier
d) All of the mentioned

9. Which of these keywords is used to define interfaces in Java?
a) interface
b) Interface
c) intf
d) Intf

10. Which of these access specifiers can be used for an interface?
a) Public
b) Protected
c) private
d) All of the mentioned

Answers: 1. a   2. a   3. c   4. a   5. c   6. c   7. b   8. d   9. a   10. a

Short Questions (2 Marks)

11. What is a package?
12. Define Abstract cass
13. Define interface
14. What is wrapper class?
15. List out any three java API packages
16. List out any three benefits of packages
17. What is a class?
18. Define constructor
19. What are the basic parts of method declaration
20. Distinguish between private and public access modifiers in java

Paragraph Questions (5 Marks)

21. Explain single inheritance with an example program (or)
22. Explain about method overriding with an example program
23. Explain class with example.
24. Briefly explain pass by value with example
25. Explain pass by reference with example
26. Explain overloading constructors in detail
27. Explain Modifiers in java
28. Explain the purpose of the import statement
29. Write a java program to create and import a package
30. How is an interface defined? Give an example.

Essay Type Questions (10 Marks)

41. What is a Package? Explain the Packages withan example and how to import packages.
42. How will you define and extend interfaces? Explain with examples
43. What are the types of inheritance possible inJava?
44. Describe the general format of a class and its parts
45. Explain the concept of constructors with an example
46. Discuss about the working of method overriding concept with an example
47. Explain the importance of Abstract class with an example. Write short notes on super keyword.
48. Give suitable example code to illustrate Map and Navigate Map interfaces.
49. Write a Java program to implement interface concept in your own program
50. What is an object? How objects are created in Java? Explain

UNIT – IV
Choose the Correct Answer

1. When does Exceptions in Java arises in code sequence?
   a) Run Time
   b) Compilation Time
   c) Can Occur Any Time
   d) None of the mentioned
2. Which of these keywords is not a part of exception handling?
   a) try
   b) finally
   c) thrown
   d) catch

3. Which of these keywords must be used to monitor for exceptions?
   a) try
   b) finally
   c) throw
   d) catch

4. Which of these method of Thread class is used to find out the priority given to a thread?
   a) get()
   b) ThreadPriority()
   c) getPriority()
   d) getThreadPriority()

5. Which of these method of Thread class is used to Suspend a thread for a period of time?
   a) sleep()
   b) terminate()
   c) suspend()
   d) stop()

6. Which function of pre defined class Thread is used to check weather current thread being checked is still running?
   a) isAlive()
   b) Join()
   c) isRunning()

d) Alive()

7. What is multithreaded programming?
    a) It's a process in which two different processes run simultaneously
    b) It's a process in which two or more parts of same process run simultaneously
    c) It's a process in which many different process are able to access same information
    d) It's a process in which a single process can access information from many sources

8. Which of these are types of multitasking?
    a) Process based
    b) Thread based
    c) Process and Thread based
    d) None of the mentioned

9. Thread priority in Java is?
    a) Integer
    b) Float
    c) double
    d) long

10. Which of these keywords are used to implement synchronization?
    a) synchronize
    b) syn
    c) synch
    d) synchronized

Answers: 1. a   2. c   3. a   4. c   5. a   6. a   7. b   8. c   9. a   10. d

Short Questions (2 Marks)

11. Define Exception Handling
12. List out the various keywords to manage the errors
13. What is the use of finally block?
14. List out any five built in exception
15. State the use of final statement
16. Define Thread
17. Define the term "Dead Lock"
18. List out the various states of Thread
19. What is multithreading
20. Define Synchronization

Paragraph Questions (5 Marks)
21. Explain the try – catch block with example
22. What are the fundamental exception types?
23. Explain multithreaded program with an example
24. Give out the detailed explanation of life cycle of thread with suitable example
25. Write a java program to implement a thread based application
26. Discuss in detail about inter-thread communication
27. Explain multiple catch exception with an example
28. How to manage errors in java. Explain

DEPARTMENT OF COMPUTER SCIENCE

29. Write a java program to implement the Arithmetic exception class
30. Write a java program to implement the ArrayIndexOutOfBounds exception class

Essay Type Questions (10 Marks)

31. Discuss about basics of exception handling in java
32. Explain the exception handling mechanism in Java with an example.
33. What is a thread? Explain any one way of creating threads in Java.
34. Describe the life cycle of a thread in Java
35. Explain how to create user defined exception class.
36. Why do we need of Exception handling? Write the general structure of Exception.
37. How does the try-catch mechanism handle an exception?
38. Express the multithreading concept of java in detail. Give an example
39. Write a java program to implement try catch block.
40. Write a java program to create a thread by extending the class Thread

UNIT – V
Choose the Correct Answer

1. What does AWT stands for?
    a) All Window Tools
    b) All Writing Tools
    c) Abstract Window Toolkit
    d) Abstract Writing Toolkit
2. Which of these is used to perform all input & output operations in Java?
    a) streams
    b) Variables
    c) classes
    d) Methods

3. Which of these is a type of stream in Java?
    a) Integer stream
    b) Short stream
    c) Byte stream
    d) Long stream

4. Which of these classes are used by Byte streams for input and output operation?
    a) InputStream
    b) InputOutputStream
    c) Reader
    d) All of the mentioned

5. Which of these classes are used by character streams for input and output operations?
    a) InputStream
    b) Writer
    c) ReadStream
    d) InputOutputStream

6. Which exception is thrown by read() method?
    a) IOException

b) InterruptedException
c) SystemException
d) SystemInputException

7. Which of these is used to read a string from the input stream?
   a) get()
   b) getLine()
   c) read()
   d) readLine()

8. Which of these class contains the methods print() & println()?
   a) System
   b) System.out
   c) BUfferedOutputStream
   d) PrintStream

9. Which of these functions is called to display the output of an applet?
   a) display()
   b) paint()
   c) displayApplet()
   d) PrintApplet()

10. Which of these methods can be used to output a string in an applet?
    a) display()
    b) print()
    c) drawString()
    d) transient()

Answers: 1. c   2. a   3. c   4. a   5. b   6. a   7. c   8. d   9. b   10. c

Short Questions (2 Marks)

11. Write about HSBColor in java
12. What is Byte Stream
13. What is File Stream
14. Define Character Stream
15. Distinguish between Input Stream and Output Stream
16. Define Applet
17. Mention any three states of applet method
18. List out any three attributes of the Applet Tag
19. List out various methods available in applet
20. List out the commands used for compiling and running an applet program

Paragraph Questions (5 Marks)
21. Discuss shortly on java's input stream
22. Explain the output stream of java in detail
23. Explain the concept of I/O Stream classes in java in detail
24. What is stream? Explain any three input and output stream classes
25. Explain about various states of applet
26. Design an applet which displays greetings

27. What is an applet? How does it differ from an application
28. Write a program to read a character from a file and display it to standard output and also check for end of file.
29. Explain Random access file
30. Explain applet life cycle

Essay Type Questions (10 Marks)

31. Illustrate the various I/O classes of java with examples.
32. Describe the life cycle of Applet. How Applet differs from applications?
33. Distinguish between input stream and output stream
34. Distinguish between Byte stream and Character stream classes
35. What is common and how do the following streams differ: InputStream, OutputStream, Reader, Writer?
36. What do you know about RandomAccessFile? Explain
37. What Is The Order Of Method Invocation In An Applet?
38. Can We Pass Parameters To An Applet From Html Page To An Applet? How?
39. Explain any method of Serializable interface.
40. What is the difference between Serializable and Externalizable interface in Java? Explain.

****