

OBJECT ORIENTED PROGRAMMING USING JAVA
CS504A

TIME ALLOTTED: 3 HOURS FULL MARKS: 70

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable

GROUP – A
(Multiple Choice Type Questions)

1. Answer any *ten* from the following, choosing the correct alternative of each question: **10×1=10**

SL. NO.	Question	Marks	CO No.
(i)	The wait() and notify() method are defined in: a) Java.lang.string b) Java.lang.object c) Java.lang.thread d) Java.lang.runnable	01	1
(ii)	Which one of the following statements is wrong? a) A base class reference can refer to an object of a derived class b) The dynamic method dispatch is not carried out at the run time c) The super() construct refers to the base class constructor d) The super.base-class-method-name() format can be used only within a derived class	1	4
(iii)	What will be the output: Intarr[]=new int[5]; arr=new int[6]; a) The code has compile errors because the variable arr cannot be changed once it is assigned. b) The code has runtime errors because the variable arr cannot be changed once it is assigned. c) The code can compile and run fine. The second line assigns a new array to arr. d) The code has compile errors because we cannot assign a different size array to arr.	1	1
(iv)	Which of these can be overloaded? a) Methods b) Constructors c) Both a & b d) None of the mentioned	1	4
(v)	What will be the output: int a=500; byte b; b=(byte)a;	01	CO2

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System.out.println(b);

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| | <ul style="list-style-type: none"> a. 244 b. Compile time error c. -12 d. None of these. | | |
| (vi) | <p>Which statement is true about a static nested class?</p> <ul style="list-style-type: none"> a. You must have a reference to an instance of the enclosing class in order to instantiate it. b. It does not have direct access to non-static members of the enclosing class. c. It's variables and methods must be static. d) It must extend the enclosing class | 1 | 1 |
| (vii) | <p>In java Scanner is a</p> <ul style="list-style-type: none"> a. Class b. Object c. Variable d. Method | 1 | 5 |
| (viii) | <p>Which of these keywords is used to refer to member of base class from a sub class?</p> <ul style="list-style-type: none"> a. upper b. super c. this d. None of the mentioned | 1 | 5 |
| (ix) | <p>In which memory a String is stored, when we create a string using new operator?</p> <ul style="list-style-type: none"> a) Stack b) String memory c) Heap memory d) Random storage space | 1 | 3 |
| (x) | <p>Which of these is a super class of all errors and exceptions in the Java language?</p> <ul style="list-style-type: none"> a. RunTimeExceptions b. Throwable c. Catchable d. None of the above | 01 | 2 |
| (xi) | <p>Which of these keywords is not a part of exception handling?</p> <ul style="list-style-type: none"> a. try b. finalized c. thrown d. catch | 01 | 1 |
| (xii) | <p>Which one of the following is wrong?</p> <ul style="list-style-type: none"> a. 'Runnable' is a predefined interface b. The sleep() method instructs a thread to terminate its execution c. The isAlive() method tells whether a thread has not yet died d. MAX_PRIORITY represents the level 10 | 1 | 5 |

GROUP – B
(Short Answer Type Questions)

(Answer any *three* of the following) **3 x 5 = 15**

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2.	a	Why do we use “static” and “public” keywords in the following statement – “public static void main(String args[])” ?	3	2
	b	Describe the usage of Command line argument in a Java program.	2	2
3.	a	What do you mean by the term “Data hiding” in Java?	1	2
	b	Explain encapsulation technique with the help of a suitable Java program.	4	2
4.		Explain the life cycle of thread.	5	2
5.	a	Why do we use “static” and “public” keywords in the following statement – “public static void main(String args[])” ?	3	2
	b	Describe the usage of Command line argument in a Java program.	2	2
6.		Explain the role of JVM.	5	1

GROUP – C
(Long Answer Type Questions)

(Answer any *three* of the following) **3 x 15 = 45**

7.	(i)	What is the difference between public and private access specifier? Discuss with an example	4	2
	(ii)	Create a user define package “LinearSearch” having a method “search()”. Then use this package to search whether a number belongs to an array or not.	6	5
	(iii)	What is narrowing type conversion in java?	5	1
8.	(i)	What is package? Discuss the benefits of package.	5	2
	(ii)	Explain applet lifecycle.	5	2
	(iii)	Describe the accessibility or scope of a) private b) protected c) default and d) public access specifiers w.r.t. java package.	5	4
9.	(i)	What is Constructor in Java?	2	2
	(ii)	What is the difference between Method and Constructor?	3	2
	(iii)	Write a simple java program where you can implement both default and parameterized constructor.	6	2
	(iv)	What is the difference between equals () and == in Java? Explain with a small Java program.	2	3
	(v)	Explain the functionality of to String () method with a Java program.	2	3
10.	(i)	What is inheritance in java? How to implement inheritance in java? Explain with code.	5	1
	(ii)	What is constructor? Explain with example.	5	1
	(iii)	Explain the differences between interface and abstract class.	5	1
11.	(i)	What is thread?	2	5
	(ii)	Write a code to explain the functionality of thread using Runnable interface.	4	5
	(iii)	Why java is called platform independent language.	3	1

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(iv)	What are the basic characteristics of Applet programming?	3	5
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