NARULA INSTITUTE OF TECHNOLOGY
An Autonomous Institute under MAKAUT

B.TECH./CSE/ODD/5th /R_18/ CS504A/2020-2021
YEAR: 2022
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)	Which of the following is not a Java features? a. Dynamic b. Architecture Neutral c. Use of pointers d. Object-oriented	01	CO1
(ii)	A package is a collection of a. Classes b. Interfaces c. Editing tools d. Both (a) and (b).	01	CO1
(iii)	Which of these method waits for the thread to terminate? a. sleep() b. isAlive() c. join() d. stop()	01	CO2
(iv)	Which of these is a super class of all errors and exceptions in the Java language? a. RunTimeExceptions b. Throwable c. Catchable d. None of the above	01	CO2
(v)	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.	01	CO1

(vi)	Exception is defined in which package? a. Java.util b. Java.awt c. Java.io d. **Java.lang**	01	CO1

(vii) In java Scanner is a — 01 — CO5
  a. **Class**
  b. Object
  c. Variable
  d. Method

(viii) Which of these is a mechanism for naming and visibility control of a class and its content? — 01 — CO1
  a. Object
  b. **Packages**
  c. Interfaces
  None of the Mentioned.

(ix) Out of the following which one is not correctly matched? — 01 — CO1
  a. **Int — 24 bits** *32*
  b. Short — 16 bits
  c. Double — 64 bits
  d. Byte — 8 bits

(x) String in Java is a — 01 — CO2
  a. **Class**
  b. Object
  c. Variable
  d. character array

(xi) Which of these keywords is not a part of exception handling? — 01 — CO1
  a. try
  b. **finalized**
  c. thrown
  d. catch

(xii) What will happen if you run the following code? — 01 — CO2
```
try
{
  int x = 0;
  int y = 5 / x;
}
catch (Exception e)
{
  System.out.println("Exception");
}
catch (ArithmeticException ae)
{
  System.out.println(" Arithmetic Exception");
}
  System.out.println("finished");
```
  a. finished
  b. Exception
  c. **Compilation fails.**
  d. Arithmetic Exception

GROUP – B
(Short Answer Type Questions)
(Answer any three of the following)   3 x 5 = 15

SL. NO.		Marks	CO No.
2.	Why main () is preceded by keyword "public static void "?	05	CO1
3.	Explain the automatic garbage collection in java.	05	CO1
4.	Explain the life cycle of thread.	05	CO2
5.	What is method overloading?	05	CO2
6.	What is inner class in java?	05	CO1

GROUP – C
(Long Answer Type Questions)

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

SL. NO.			Marks	CO No.
7.	(i)	What is JVM and byte code?	05	CO2
	(ii)	How to handle different types of exception using multiple catch statement?	05	CO1
	(iii)	What is for each loop? What are the benefits of that loop?	05	CO2
8.	(i)	What is inheritance in java? How to implement inheritance in java? Explain with code.	05	CO1
	(ii)	What is parametric constructor? Explain with example.	05	CO1
	(iii)	Explain the differences between interface and abstract class.	05	CO1
9.	(i)	What is package? Discuss the benefits of package.	05	CO2
	(ii)	Explain applet lifecycle.	05	CO2
	(iii)	What do you mean by synchronization between threads? How we implement synchronization between two threads? Explain with example code.	05	CO2
10.	(i)	What is the difference between public and private access specifier? Discuss with an example	04	CO2
	(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.	06	CO5
	(iii)	What is narrowing type conversion in java?	05	CO1
11.	(i)	Explain the utility of final keyword with example code.	05	CO2

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(ii)	What is abstract class? Explain with an example.	05	CO2
(iii)	What is the difference between sleep and wait method?	05	CO2