**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, APRIL 2023**

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|  | **1BC2103** | Roll No. | Total Printed Pages: 2 |
| **1BC2103** |  |
| BCA I Year II- Semester (Main/Back) End Semester Examination, April 2023  **(All Spl.)** | |
| **BCACCA2102 : OOPS with Java** | | | |

# Time: **3** Hours. Total Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **1.--------------------------Nil--------------------** **2.------------------Nil-----------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** | **(a)** | Elucidate the OOP features with appropriate example. | **(6)** | **Understanding** |
|  |  |  |  |  |
|  | **(b)** | Explain with examples the 6 operators in Java. | **(6)** | **Knowledge** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.2** |  | Compute the output and explain the operator precedence code below:  public class Test {  public static void main(String[] args){  int x = 10, y = 5, z = 3;  int exp1 = (y \* (x / y + x / y));  int exp2 = (y \* x / y + y \* x / y);  int exp3 = (x - y)/3 + ((z \* 2) - 1);  System.out.println(exp1);  System.out.println(exp2);  System.out.println(exp3);  System.out.println(exp1+exp2+exp3); }} | **(12)** | **Apply** |
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|  |  | **UNIT-II (CO2)** |  |  |
|  |  |  |  |  |
| **Q.3** | **(a)** | Distinguish between compile time polymorphism and runtime polymorphism with appropriate example. | **(6)** | **Evaluate** |
|  |  |  |  |  |
|  | **(b)** | With appropriate code snippet explain the use of super keyword. | **(6)** | **Understanding** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
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| **Q.4** |  | What will be the output after executing following code? Write the steps and values obtained in each iteration.  class Main {  public static int Function(int n) {  if(n == 0) return 1;  if(n < 0) n = -n;  int res = 0;  while(n != 0) {  n = n/10;  res++;}  return res;}  public static void main(String args[]) {  int[] myNum = {64, 128, 1024};  for (int i=0; i< myNum.length; i++)  System.out.println( myNum[i] + " : " + Function (myNum[i]));}} | **(12)** | **Apply** |
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|  |  | **UNIT-III (CO3)** |  |  |
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| **Q.5** | **(a)** | Differentiate between abstract classes and Interfaces | **(6)** | **Evaluate** |
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|  | **(b)** | What are packages in java? Explain the different access protection of importing packages. | **(6)** | **Knowledge** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.6** |  | Debug the code for 3 compilation errors, explain the reason and rewrite the rectified code with correct output.  public class ExceptionHandling{  public static void main(String[] args) {  try {  int a=5, b=0;  int i = a/b; }  System.out.println("What am I doing here?");  catch(Exception ex) {  System.out.println("I handle all exceptions"); }  catch(ArithmeticException ex) {  System.out.println("Will I be able to catch the divide by 0 exception?");}  System.out.println("Am I allowed here?");  finally{  System.out.println(“I must always execute"); } } } | **(12)** | **Apply** |
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|  |  | **UNIT-IV (CO4)** |  |  |
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| **Q.7** | **(a)** | Elucidate thread priorities and thread synchronization with appropriate code snippets. | **(6)** | **Understanding** |
|  |  |  |  |  |
|  | **(b)** | Explain in detail the AWT Delegation Event Model. | **(6)** | **Understanding** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
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| **Q.8** |  | Write a Console Menu based java program where when user enters 1 the contents of the file must be displayed on console, when user enters 2 the contents of the file must be copied to another file and when user enters 3 the program must exit. | **(12)** | **Apply** |
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|  |  | **UNIT V (CO5)** |  |  |
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| **Q.9** | **(a)** | Explain the JDBC Architecture with appropriate diagram. | **(6)** | **Knowledge** |
|  |  |  |  |  |
|  | **(b)** | Write a short note on 4 types of drivers in JDBC | **(6)** | **Knowledge** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.10** |  | With appropriate code snippets explain in detail the steps to connect to a database using JDBC. | **(12)** | **Understanding** |