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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_\_

**End Semester Examination – Nov/Dec - 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **12CA203** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **FUNDAMENTALS OF JAVA** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | | **Marks** |
| **PART-A(10X1=10 MARKS)** | | | |
| 1. | What is a bytecode? | | (1) |
| 2. | What is an Applet? | | (1) |
| 3. | Define recursion. | | (1) |
| 4. | What is an abstract class? | | (1) |
| 5. | What is method overriding? | | (1) |
| 6. | Expand AWT. | | (1) |
| 7. | Differentiate equals() and == in comparing a string. | | (1) |
| 8. | Which is the super class for all exception types? | | (1) |
| 9. | What is the architecture of swing components called? | | (1) |
| 10. | What is encapsulation? | | (1) |
| **PART B(5 X 3= 15 MARKS)** | | | |
| 11. | Write a Java program to read the radius of a circle as input and calculate the area of the circle. | | (3) |
| 12. | Define inheritance. | | (3) |
| 13. | State the uses of *final* keyword | | (3) |
| 14. | What are the two methods to create a thread in Java? | | (3) |
| 15. | Give the syntax of the following applet methods:   1. drawstring() 2. setBackground() 3. getForeground() | | (3) |
| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. |  | List the operators in Java and explain their functionalities | (15) |
| (OR) | | | |
| 17. | a. | Explain the iteration structures in Java with an example for each | (9) |
| b. | Differentiate break and continue with an example program. | (6) |
| 18. | a. | Create a ‘box’ class with three data members: width, height and depth. Include a method to return the volume of the box. Create two box objects and print their volumes. | (7) |
| b. | What is method overloading? Explain with an example. | (8) |
| (OR) | | | |
| 19. |  | Explain the different types of inheritance in Java with examples. | (15) |
| 20. | a. | What are the keywords for handling exceptions in Java? | (5) |
| b. | Write a program to handle exceptions in Java. | (10) |
| (OR) | | | |
| 21. | a. | Write short notes on synchronization and deadlock. | (8) |
| b. | Explain the life cycle of a thread. | (7) |
| 22. | a. | Discuss the usage of packages in Java. | (9) |
| b. | Describe access protection in packages. | (6) |
| (OR) | | | |
| 23. | a. | How do you handle input/output operations in Java? | (8) |
| b. | Explain the methods available in Java for comparison of strings with syntax and examples. | (7) |
| 24. | a. | Outline the skeleton of an applet and explain the applet life cycle methods. | (8) |
| b. | Write a simple applet program to draw a string on the screen. | (7) |
| (OR) | | | |
| 25. |  | Explain any 3 layout managers in java.awt package with suitable examples. | (15) |

ALL THE BEST