Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 20867

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2023.

Third/Fourth Semester

Computer Science and Engineering

CS 3391 – OBJECT ORIENTED PROGRAMMING

(Common to : Computer Science and Design/Biomedical Engineering/Computer Science and Engineering (Artificial Intelligence and Machine Learning)/Computer Science and Engineering (Cyber Security)/Computer and Communication Engineering/Medical Electronics/Computer Science and Business Systems and Information Technology)

(Regulations 2021)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is an array? How multidimensional arrays are implemented in Java?
2. Name the access modifiers in Java.
3. Define inheritance.
4. How can a subclass can call a constructor defined by its superclass?
5. Outline the difference between unchecked exceptions and checked exceptions.
6. Name the methods used by Java for interprocess communication to avoid polling.
7. What are streams?
8. Why parameterized types are important?
9. What is JavaFX?
10. Write a note on HBox and VBox.

PART B — (5 × 13 = 65 marks)

11. (a) (i) List the symbols that are used as separators in Java and present an outline of the same. (7)

(ii) Outline the primitive types of data in Java. (6)

Or

(b) (i) Outline the bitwise operators in Java that can be applied to the integer type. (7)

(ii) Outline while and do–while iteration statements in Java with its general form. (6)

12. (a) Outline method overloading and method overriding in Java with code fragments. (13)

Or

(b) What is an interface? How to define an interface? How one or more classes can implement an interface? Outline with code fragments. (13)

13. (a) (i) What is a Java exception? How Java exception handling is managed? Outline. (7)

(ii) Outline Java's checked exceptions defined a java.lang package. (6)

Or

(b) Present an outline of Java's multithreading system. Also outline the two ways to create a thread. (13)

14. (a) (i) Outline reading console input and writing console output in Java.(8)

(ii) Present an outline of FileInputStream and FileOutputStream classes. (5)

Or

(b) What is StringBuffer? Name and outline the constructors defined by StringBuffer with code fragments. (13)

15. (a) What is a button? Name and outline the types of buttons JavaFX provides with visual representations. (13)

Or

(b) Name and outline the types of panes JavaFX provides for organizing nodes in a container. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Write a Java program to accept 'n' names, store it in an array, sort the names in alphabetic order and display the result. Use classes and methods. (15)

Or

(b) Write a Java program to accept two square matrices, store them in an array, add the matrices and display the result. Use classes and methods. (15)