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

Question Paper Code : 40389

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Third/Fourth/Fifth Semester

Computer Science and Engineering

CS 8392 – OBJECT ORIENTED PROGRAMMING

(Common to: Computer and Communication Engineering / Electrical and Electronics Engineering/ Electronics and Communication Engineering/ Electronics and Instrumentation Engineering/ Electronics and Telecommunication Engineering/ Instrumentation and Control Engineering/ Artificial Intelligence and Data Science/ Computer Science and Business System/ Information Technology)

(Regulations 2017)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. What is encapsulation?

2. Define polymorphism.

3. When a class must be declared as abstract?

4. Outline the use of extends keyword in Java with syntax.

5. What is chained exception?

6. How character streams are defined?

7. Name the two ways to create a thread in Java.

8. What is synchronization?

9. Name the two methods defined in java.util. EventObject.

10. Draw the class hierarchy for Panel and Frame.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Outline the arithmetic operators in Java. (6)

(ii) Name the four integer types in Java and outline the bitwise operators that can be applied to the integer types. (7)

Or

(b) (i) Outline the iteration statements in Java with syntax and example. (9)

(ii) Outline the use of constructors and this keyword in Java. (4)

12. (a) (i) When a class hierarchy is created, in what order are the constructors for the classes that make up the hierarchy called? Outline with an example. (6)

(ii) Outline method overriding with an example. (7)

Or

(b) (i) Write a note on interfaces and present the syntax for defining an interface. (7)

(ii) Outline how interfaces are implemented in Java with an example. (6)

13. (a) (i) "Java exception handling is managed via five keywords". Name the five key words and present an outline of an exception-handling block with syntax. (6)

(ii) Present an outline of Java's checked exceptions defined in java. lang. (7)

Or

(b) What is InputStream? Present an outline of the methods defined by InputStream. (13)

14. (a) (i) Outline the states a thread can be in and specify the rules that determine when a context switch takes place. (7)

(ii) Present an outline of the methods used by Java for interprocess communication. (6)

Or

(b) (i) Why parameterized types are important? Outline Java generics with an example. (7)

(ii) Outline parameter type bounds with an example. (6)

15. (a) What is AWTEvent class? Name the main event classes in java.awt.event and provide an outline of when they are generated. (13)

Or

(b) (i) Outline the use of setSize(), getSize( ), setVisible() and setTitle() methods when working with frame windows with their signature. (8)

(ii) Name the four types of buttons swing defines and present an outline of the same. (5)

PART C — ($1 \times 15 = 15$ 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)

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