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Question Paper Code: 93304

B.E./B.Tech. DEGREE EXAMINATION, NOV 2023

Third Semester

Computer Science Engineering

19UCS304 – Object Oriented Programming with Java

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Java compiler translates Java source code into _____. CO1- U
(a) Java bytecode (b) machine code.
(c) assembly code (d) another high-level language code.
2. What is false about constructor? CO3- U
(a) Constructors cannot be synchronized in Java
(b) Java does not provide default copy constructor
(c) Constructor can have a return type
(d) “this” and “super” can be used in a constructor
3. Which of these type parameters is used for a generic methods to return and accept any type of object? CO4- U
(a) K (b) N (c) T (d) V
4. The exception class is in ____ package CO5- U
(a) java.file (b) java.io (c) java.lang (d) java.util
5. Which is the feature of JavaFX? CO6- U
(a) FXML (b) Scene Builder
(c) CSS-like Styling (d) All of them

PART – B (5 x 3= 15 Marks)

6. Differentiate class and objects. CO1- U

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|-----|---|--------|
| 7. | Differentiate method overloading and method overriding. | CO3- U |
| 8. | What are bounded type parameters in generic class? | CO4- U |
| 9. | When is the finally clause of a try-catch-finally statement executed? | CO5- U |
| 10. | Draw Java FX Architecture. | CO6- U |

PART – C (5 x 16= 80Marks)

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| 11. | (a) Create a class called StudentData with properties ID, Name, and Age and methods to get and set these properties. Create Default and parameterized constructors to instantiate objects from the StudentData class. Call the getter and setter methods of each object's properties. | CO1- Ana | (16) |
| | Or | | |
| | (b) Write a java program that will accept an array of salary details of employees and sort the salaries of the employees. | CO1- Ana | (16) |
| 12. | (a) Develop a abstract Reservation class which has Reserve abstract method. Implement the sub-classes like ReserveTrain and ReserveBus classes and implement the same. | CO3- Ana | (16) |
| | Or | | |
| | (b) Develop a Library interface which has drawbook(), returnbook() (with fine), checkstatus() and reservebook() methods. All the methods tagged with public. | CO3- Ana | (16) |
| 13. | (a) Create a class with a generic method that can find out the maximum among the three arguments supplied. | CO4- Ana | (16) |
| | Or | | |
| | (b) Create a generic class which can accept any data item as its property. Define getter and setter methods for the property. | CO4- Ana | (16) |
| 14. | (a) A buyer has some money X in his pocket. He wishes to know how many units of different items he can buy from a shop. He automates this such that, the program will display how many number of each item can be bought with the money X and display “Sorry no item to sell” if the particular item is not available. The code for automation accepts the input as how many different kinds of items to check. Write a solution for this automation process. | CO5- Ana | (16) |

Or

- (b) Write a solution to calculate the average of the marks for a number of students in an examination. If a mark is within the range 45 – 50, it is considered as an abnormal situation to calculate the average and appropriate error message should be displayed. If the mark is 0, then it is considered another abnormal mark and the average should not be calculated and error message need to be displayed. CO5- Ana (16)
15. (a) Write a program that creates a window entitles “File Copier”. It contains one button saying “Choose a file to copy”. When the button is clicked, an open file chooser dialog appears. If a file is selected, a save file chooser dialog appears that allows the user to specify the name of the file. CO6- Ana (16)
- Or
- (b) Create a window entitles “change Color”. It contains three buttons namely “RED”, “GREEN” and “BLUE”. When a button is clicked, then the background color will be changed to appropriate color. CO6- Ana (16)

