**V23**

Course code: **V23CST05 HTNO**

**SRI VASAVI ENGINEERING COLLEGE (Autonomous)**

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**B.Tech III Semester Regular Examinations,December-2024**

**(Model Paper)**

**OBJECT ORIENTED PROGRAMMING THROUGH JAVA**

(Common To CSE, CST, CSE(AI) & AIML)

Time: 3 Hrs Max. Marks: 70

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|  |  |  | PART-A **Answer All the Questions.** |  |
| 1. |  |  |  | **20 M** |
|  | a |  | List out Object Oriented Programing concepts | CO1-K1(2M) |
|  | b |  | Explain the working of for each loop. | CO1-K2(2M) |
|  | c |  | Explain about new operator. | CO2-K1(2M) |
|  | d |  | List the rules of constructors. | CO2-K2(2M) |
|  | e |  | Discuss about multilevel inheritance | CO3-K1(2M) |
|  | f |  | Differentiate between abstract class and interface | CO3-K2(2M) |
|  | h |  | Explain two methods in Scanner class, | CO4-K1(2M) |
|  | g |  | Describe abou NullpointerException. | CO4-K2(2M) |
|  | h |  | Define inter thread communication. | CO5-K1(2M) |
|  | i |  | List out the layouts in javaFX. | CO5-K2(2M) |
|  |  |  | PART-B **All Questions Carry Equal Marks** |  |
| 2. |  |  |  | **10 M** |
|  | A. | i. | Explain the tokens in java. | CO1- K2(5M) |
|  |  | ii. | Develop a java program to calculate and display the sum of all the command line arguments. | CO1- K3(5M) |
|  |  |  | OR |  |
|  | B. | i. | Explain the scope and life time of variables. | CO1- K2(5M) |
|  |  | ii. | Develop a java program to check whether the given number is prime or not. | CO1- K3(5M) |
|  |  |  |  |  |
| 3. |  |  |  | **10 M** |
|  | A. | i. | Explain the concept of accessing the members of a class with an example. | CO2- K2(5M) |
|  |  | ii | Develop a java program to implement method overriding. | CO2- K3(5M) |
|  |  |  | OR |  |
|  | B. | i. | Explain about constructor overloading with a sample code. | CO2- K2(5M) |
|  |  | ii | Demonstrate the concept of pass by reference using a java program. | CO2- K3(5M) |
|  |  |  |  |  |
| 4. |  |  |  | **10 M** |
|  | A. | i. | Explain different forms of inheritance. | CO3- K2(5M) |
|  |  | ii. | Develop a java program to sort given list of numbers. | CO3- K3(5M) |
|  |  |  | OR |  |
|  | B. | i. | Explain the need of interfaces in implementing inheritance. | CO3- K2(5M) |
|  |  | ii. | Demonstrate concept of super keyword using a java program. | CO3- K3(5M) |
|  |  |  |  |  |
| 5. |  |  |  | **10 M** |
|  | A. | i. | Explain exception hierarchy with a diagram. | CO4- K2(5M) |
|  |  | ii. | Develop a java program to modify and retrieve String literals | CO4- K3(5M) |
|  |  |  | OR |  |
|  | B. | i. | Explain about auto-boxing and auto-unboxing in Wrapper class. | CO4- K2(5M) |
|  |  | ii. | Develop a java program to handle ArithmeticException and ArrayIndexOutOfBoundsException. | CO4- K3(5M) |
|  |  |  |  |  |
| 6. |  |  |  | **10 M** |
|  | A. | i. | Explain String and StringBuffer classes. | CO5- K2(5M) |
|  |  | ii. | Demonstrate the concept of creating multithreading using Runnable interface. | CO5- K3(5M) |
|  |  |  | OR |  |
|  | B. | i. | Explain the life cycle of thread with a diagram. | CO5- K2(5M) |
|  |  | ii. | Develop a JavaFX program that demonstrates the use of onMouseClicked and onMouseMoved events. | CO5- K3(5M) |
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