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| **DIT UNIVERSITY DEHRADUN**   |  |  | | --- | --- | | **B.TECH (CSE)** | **(Back)MID TERM EXAMINATION, ODD SEM 2023-24 (SEM IV)** | | | | | | | | | | | | | |
| **Roll No.** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Subject Name: Advanced Java Programming** | | | | | | | | | | | | |

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| **Time: 2 Hours** | **Total Marks: 50** |
| **Note: All questions are compulsory. No student is allowed to leave the examination hall before the completion of the exam.**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   |  |  |  | | --- | --- | --- | | **Q.1)** | **Attempt all Parts :** | | |  | **(a)** | Does Java Support Multiple Inheritance? Justify? | |  | **(b)** | Explain the life cycle of a Thread . | |  | **(c)** | Differentiate between overloading and overriding with the help of suitable  example. | |  | **(d)** | Explain the Event Delegation model and its components. | |  |  | **[4 x 2.5= 10]** | | **Q.2)** | **Attempt all Parts :** | | |  | **(a)** | What do you mean by "garbage collection" in Java? Give advantages and disadvantages of garbage collection. | |  | **(b)** | What is an Abstract class in Java? Explain how an abstract class is created with the help of an example ? | |  | **(c)** | What is Static keyword? Explain the uses of static keyword in Java with an example. | |  | **(d)** | What is the significance of Adapter class in Java? Explain the Java Adapter Classes with Example . | |  |  | **[4 x 2.5= 10]** | | **Q.3)** | **Attempt any Two Parts :** | | |  | **(a)** | Explain the Polymorphism and its types using appropriate examples. | |  | **(b)** | Explain different keywords that are used to handle the Exceptions in Java. Write a program to calculate the factorial of the given number and throw an exception when number is less than 0. Display exception message as "number is negative". | |  | **(c)** | What is AWT ?Explain the hierarchy of AWT classes in java. | |  |  | **[2 x 5= 10]** | | **Q.4)** | **Attempt any Two Parts :** | | |  | **(a)** | Explain any five advantages of Swing over AWT. | |  | **(b)** | Write the difference between Applet and Application. Explain the different steps in the life cycle of an applet. | |  | **(c)** | What is layout manager? Explain any two layouts in Java briefly. | |  |  | **[2 x 5= 10]** | | **Q.5)** | **Attempt any Two Parts :** | | |  | **(a)** | Write a java program to create a frame containing Two buttons (Display, Clear) and one text Box. When button Display is pressed, the message “Hello” is printed on Text Box. On pressing Clear button the message from Text Box will be cleared.. | |  | **(b)** | Write a program to create two threads thread 1 and thread 2 to print number from 1 to 5 and 6 to 10 respectively . | |  | **(c)** | Explain two approaches to implement the thread concept using a suitable example. | |  |  | **[2 x 5= 10]** | | **-----END OF PAPER ----** | | | | |