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| **DIT UNIVERSITY DEHRADUN**   |  |  | | --- | --- | | **B.TECH (CSE)** | **MIDTERM EXAMINATION,EVEN SEM 2022-23 (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 :** | | **BTL** | **CO** | |  | **(a)** | **Explain with an example how multiple inheritance is achieved in Java.** | **2** | **1** | |  | **(b)** | **What is Multithreading? Explain the advantage of multithreading in Java .** | **1,2** | **3** | |  | **(c)** | **Differentiate between overloading and overriding with the help of suitable**  **example.** | **4** | **1** | |  | **(d)** | **What is an event handling in Java? Describe different components of an event handling.** | **1,2** | **1** | |  |  | **[4 x 2.5= 10]** |  |  | |  | | |  |  | | **Q.2)** | **Attempt all Parts :** | | **BTL** | **CO** | |  | **(a)** | **What is "garbage collection"in Java? Give advantages and disadvantages of garbage collection.** | **1** | **1** | |  | **(b)** | **Define an interface in Java. Explain how an interface is created with the help of an example.** | **1,2** | **1** | |  | **(c)** | **What is final keyword? Explain different uses of final in Java.** | **1,2** | **1** | |  | **(d)** | **Explain the significance of Adapter class in Java with a suitable example .** | **2** | **1** | |  |  | **[4 x 2.5= 10]** |  |  | |  | | |  |  | | **Q.3)** | **Attempt any Two Parts :** | | **BTL** | **CO** | |  | **(a)** | **What is Polymorphism? Explain advantage of polymorphism with an example of managing different types of Bank Account.** | **1,2** | **1** | |  | **(b)** | **Define Exception. Explain how exceptions are handled in Java. Write a Queue class that throws an exception when the Queue is full. Display exception message as "Queue is full".** | **1,4** | **1** | |  | **(c)** | **What is GUI? Explain the hierarchy of AWT classes in java.** | **1,2** | **1** | |  |  | **[2 x 5= 10]** |  |  | |  | | |  |  | | **Q.4)** | **Attempt any Two Parts :** | | **BTL** | **CO** | |  | **(a)** | **List any five differences between AWT and Swing components.** | **1** | **1** | |  | **(b)** | **Define Java applet. How it is different from Java application program**? **Explain the different steps in the life cycle of an applet.** | **1,2** | **1** | |  | **(c)** | **What is layout manager? Explain any two layouts in Java briefly.** | **1,2** | **1** | |  |  | **[2 x 5= 10]** |  |  | |  | | |  |  | | **Q.5)** | **Attempt any Two Parts :** | | **BTL** | **CO** | |  | **(a)** | **Write a java program to create a frame containing three buttons (Yes, No, Close). When button yes or no is pressed, the message "Button Yes/No is pressed" gets displayed in label control. On pressing CLOSE button frame window gets closed.** | **4** | **1** | |  | **(b)** | **Write a program to create two threads thread 1 and thread 2 set the maximum priority to thread 2 and minimum priority to thread 1.** | **4** | **3** | |  | **(c)** | **Explain two methods to create thread using a suitable example.** | **2** | **3** | |  |  | **[2 x 5= 10]** |  |  | | **-----END OF PAPER ----** | | |  |  | | |