**Attempt all the question 2 times : submission date :2081/4/15**

ADVANCE PROGRAMMING IN JAVA

1. Compare AWT with Swing. Write a GUI program using components to find sum and difference of two numbers.Use two text fields for giving input and a label for output. The program should display sum if  user presses mouse and difference if user release mouse.(2+8)

10 marks [view](https://www.collegenote.net/question-answer/p-1-compare-awt-with-swing-write-a-gui-program-using-components-to-find-sum-and-difference-of-two-numbers-use-two-text-fields-for-giving-input-and-a-label-for-output-the-program-should-display-sum-if-nbsp-user-presses-mouse-and-difference-if-user-release-mouse-2-8-br-p-24556)

2. Explain life-cycle of servlet in detail.Create a simple servlet that reads and displaysdata from HTML form. Assume form with two fields username and password.(5+5)

10 marks [view](https://www.collegenote.net/question-answer/p-2-explain-life-cycle-of-servlet-in-detail-create-a-simple-servlet-that-reads-and-displaysdata-from-html-form-assume-form-with-two-fields-username-and-password-5-5-br-p-24557)

3. Explain RMI architecture layers in detail. Write a Java programs using RMI to find product of two numbers.(4+6)

4. What is package? How can you create your own package in Java? Explain with example.(1+4)

5 marks [view](https://www.collegenote.net/question-answer/p-4-what-is-package-how-can-you-create-your-own-package-in-java-explain-with-example-1-4-br-p-24559)

5. Why do we need swing components ? Explain the uses of check boxes and radio buttons in GUI programming. (2+3)

5 marks [view](https://www.collegenote.net/question-answer/p-5-why-do-we-need-swing-components-explain-the-uses-of-check-boxes-and-radio-buttons-in-gui-programming-2-3-br-p-24560)

6. How can we use listener interface to handle events? Compare listener interface with adapter class. (3+2)

5 marks [view](https://www.collegenote.net/question-answer/p-6-how-can-we-use-listener-interface-to-handle-events-compare-listener-interface-with-adapter-class-3-2-br-p-24561)

7. What is row set? Explain cached row set in detail.(1+4)

5 marks [view](https://www.collegenote.net/question-answer/p-7-what-is-row-set-explain-cached-row-set-in-detail-1-4-br-p-24562)

8. What is Java Mail API ? How can you use this API to send email messages? (1+4)

5 marks [view](https://www.collegenote.net/question-answer/p-8-what-is-java-mail-api-how-can-you-use-this-api-to-send-email-messages-1-4-br-p-24563)

9. Compare JavaFX with swing. Explain HBox and BBox layouts of JavaFX.(2+3)

5 marks [view](https://www.collegenote.net/question-answer/p-9-compare-javafx-with-swing-explain-hbox-and-bbox-layouts-of-javafx-2-3-br-p-24564)

10. What is servlet? Write a simple JSP file to display "Tribhuwan University" five times. (2+3)

5 marks [view](https://www.collegenote.net/question-answer/p-10-what-is-servlet-write-a-simple-jsp-file-to-display-tribhuwan-university-five-times-2-3-br-p-24565)

11. Why CORBA is important? Compare CORBA with RMI. (3+2)

1, What is the significance of stub and skeleton In RMI? Create a RMI application such that a client sends an Integer number to the server and the server return the factorial value of that integer. Give a clear specification for every step. (10)

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-4-a-non-empty-array-a-of-length-n-is-called-on-array-of-all-possibilities-if-it-contains-all-numbers-between-0-and-a-length-1-inclusive-write-a-method-named-i-b-isallpossibilities-b-i-that-accepts-an-integer-array-and-returns-1-if-the-array-is-an-array-of-all-possiblities-otherwise-it-returns-0-15-br-p-23875)

5. Define event delegation model. Why do we need adapter class in event handling? (2+3)

5 marks [view](https://www.collegenote.net/question-answer/p-5-define-event-delegation-model-why-do-we-need-adapter-class-in-event-handling-2-3-br-p-23876)

6. What is the task of Layout manager? Describe about default layout manager. (1 +4)

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-6-what-is-the-task-of-layout-manager-describe-about-default-layout-manager-1-4-br-p-23877)

7. When does the finally block is mandatory in while handling exception? Describe with a suitable scenario. (5)

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-7-when-does-the-finally-block-is-mandatory-in-while-handling-exception-describe-with-a-suitable-scenario-5-br-p-23878)

8. Explain the life cycle of a servlet. (5)

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-8-explain-the-life-cycle-of-a-servlet-5-br-p-23879)

9. What is the task of manifest file? Write the procedure to create it. [2 + 3]

5 marks [view](https://www.collegenote.net/question-answer/p-9-what-is-the-task-of-manifest-file-write-the-procedure-to-create-it-2-3-br-p-23880)

10. Why multiple inheritance is not allowed in Java using classes? Give an example.(5)

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-10-why-multiple-inheritance-is-not-allowed-in-java-using-classes-give-an-example-5-br-p-23881)

11. How forms can be created and processed using JSP? Make it clear with your own assumptions. [5]

5 marks [view](https://www.collegenote.net/question-answer/p-11-how-forms-can-be-created-and-processed-using-jsp-make-it-clear-with-your-own-assumptions-5-br-p-23882)

12. Why synchronization in essential in multithreading? Describe. (5)

1. What is exception handling? Discuss the use of each keyword (try, catch, throw, throws and finally) with suitable Java program.

10 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-1-what-is-exception-handling-discuss-the-use-of-each-keyword-try-catch-throw-throws-and-finally-with-suitable-java-program-p-22383)

2. Write a Java program to find the sum of two numbers using swing components. Use text fields for input and output. Your program displays output if you press any key in keyboard. Use key adapter to handle  events.

10 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-2-write-a-java-program-to-find-the-sum-of-two-numbers-using-swing-components-use-text-fields-for-input-and-output-your-program-displays-output-if-you-press-any-key-in-keyboard-use-key-adapter-to-handle-nbsp-events-p-22384)

3. Define servlet. Discuss life cycle of servlet. Differentiate servlet with JSP. Write a simple JSP file to display 'IOST' 20 times.

10 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-3-define-servlet-discuss-life-cycle-of-servlet-differentiate-servlet-with-jsp-write-a-simple-jsp-file-to-display-iost-20-times-p-22385)

Group B

Attempt any eight questions. (8x5=40)

4. Define class. How do you create a class in Java? Differentiate class with interface.

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-4-define-class-how-do-you-create-a-class-in-java-differentiate-class-with-interface-br-p-22386)

5. Write a simple Java program that reads a file named "Test.txt" and displays its contents.

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-5-write-a-simple-java-program-that-reads-a-file-named-test-txt-and-displays-its-contents-br-p-22387)

6. Why do we need layout management? What is GridBag layout?

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-6-why-do-we-need-layout-management-what-is-gridbag-layout-br-p-22388)

7. Discuss MVC design pattern with example.

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-7-discuss-mvc-design-pattern-with-example-br-p-22389)

8. What are the benefits of using JDBC? What is prepared statement?

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-8-what-are-the-benefits-of-using-jdbc-what-is-prepared-statement-br-p-22390)

9. Write Java programs using TCP sockets that communicate with each other in a computer network.

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-9-write-java-programs-using-tcp-sockets-that-communicate-with-each-other-in-a-computer-network-br-p-22391)

10. Define Java Bean. How is it different from other Java programs? What is design pattern?

5 marks [view](https://www.collegenote.net/question-answer/p-10-define-java-bean-how-is-it-different-from-other-java-programs-what-is-design-pattern-br-p-22392)

11. How do you handle HTTP request (GET) using servlet?

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-11-how-do-you-handle-http-request-get-using-servlet-br-p-22393)

12. What are different layers of RMI architecture? Explain.

5 marks Toggle Answer [view](https://www.collegenote.net/question-answer/p-12-what-are-different-layers-of-rmi-architecture-explain-br-p-22394)

13. Write short notes on:

* Servlet API

a. JAVA beans and JAR file

b. MVC design pattern

   a. JDBC drivers

   b. Java server pages