

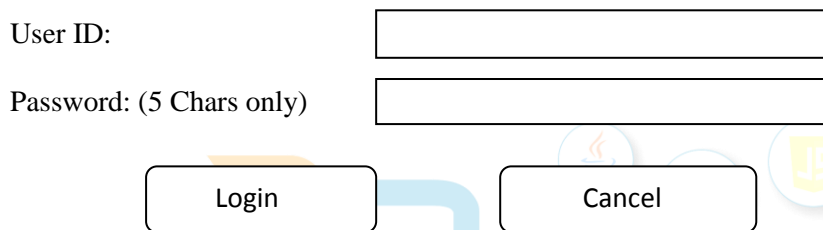
- N. B.: (1) **All** questions are **compulsory**.
 (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
 (3) Answers to the **same question** must be **written together**.
 (4) Numbers to the **right** indicate **marks**.
 (5) Draw **neat labelled diagrams** wherever **necessary**.
 (6) Use of **Non-programmable** calculators is **allowed**.

1. Attempt any two of the following

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- Write a short note on “Event Listeners”. Explain the working with code specification.
- How does AWT create Radio Buttons? Explain with syntax and code specification.
- What is the default layout of the Frame? Explain the same.
- Write a java AWT program that creates the following GUI.(Consider the window Closing event)

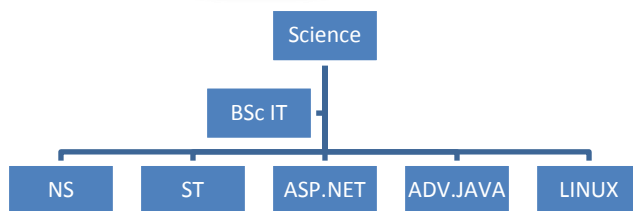
Login Screen



2. Attempt any two of the following

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- Explain the new features of JFC.
- How to denote the user about the software loading process? Which component is facilitating the same? Explain with code specification.
- How do divide frame window in 2 parts? Explain with code specification.
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Write a java swing program that creates the above mentioned hierarchical tree data

3. Attempt any two of the following

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- Explain the reasons why servlet is preferred over CGI.
- Explain the methods that RequestDispatcher interface does consist of with the relevant code specification.
- Write a servlet that prints the sum of square of n integer numbers.
- Explain the life cycle phases of servlet.

4. Attempt any two of the following

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- a. a) Explain the components of JDBC.
- b. b) Write an exhaustive note on “**PreparedStatement**”. Attach code specification to support your answer.
- c. c) Enlist the implicit objects of JSP. Explain any 4 of them in detail.
- d. d) Write a jsp that accepts user-login details and forward the result either “**Access granted**” or “**Access denied**” to result.jsp.

5. Attempt any two of the following

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- a. a) Enlist the lifecycle phases of JSF. Explain the following phases in detail.
 - Restore View
 - Apply Request Values
 - Update Model Values
 - Render Response
- b. How does JSF application get execute? Explain.
- c. Write a session bean code specification that calculates compound interest. Assume the principal terms and rate of interest is entered by the user and the input is passed through a servlet.
- d. Explain the advantages of EJB.

6. Attempt any two of the following

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- a. Explain the different roles of Action in struts framework.
- b. What is value-stack? What are the different types of objects that it can hold off? Explain their accessing strategy.
- c. Explain the importance of mapping and show the creation of mapping file in hibernate framework.
- d. Explain the architecture of hibernate framework in detail.