

19IS403/16IS501

Make up/Supplementary - September 2020
is done in Java? Write a Java program to support this statement
"Threads can be given priorities"

- a) Write a short on FileReader and FileWriter. Write a Java program which makes use of two classes to copy an input file into an output file using Byte streams.

10 L3 3 1

Unit - IV

- a) List and describe the different types of swing buttons. Give suitable examples for each type.

10 L3 3 1

- b) Write a Java program using listeners for handling Mouse Events.

10 L1 4 2

- a) Explain the following, with an example for each:

10 L2 4 2

- JTextField class
- JTable class
- JComboBox class

- b) Write a Java program using listeners for handling Keyboard Events.

10 L1 4 2

10 L2 4 2

Unit - V

- a) What is JDBC driver? With a help of a diagram, illustrate Network Protocol JDBC driver.

10 L2 5 2

- b) Write a short note on ResultSetMetaData. With a help of a program, demonstrate positional access operations, search operations, subList operations on List interface.

10 L3 5 1

- a) What is the role of the JDBC DriverManager class? List and explain the steps INVOLVED IN Java database connectivity.

10 L2 5 2

- b) Describe the different methods of transaction processing. With a help of a program, demonstrate how to create, initialize, add and remove elements from ArrayList.

10 L3 5 1

Bloom's Taxonomy, L* Level; CO* Course Outcome; PO* Program Outcome

19IS403/16IS501

Make up / Supplementary - September 2021
Write a program to create to implement a Stack using Generic Classes.

- a) Explain the usage of Map Classes along with its variants.

10 L2 4 1

10 L2 4 1

- a) Explain with an example program the running of an JavaFX Application.

- b) Write a java program to perform the following:

6 L2 5 1

- Reverse a string by extracting each character.
- Verify whether the string is a **palindrome** or not.
- Count the occurrence of each letter in string.

- c) Briefly explain with a pseudocode, the following Javafx controls

8 L2 5 1

- Radio Button
- CheckBox
- ComboBox

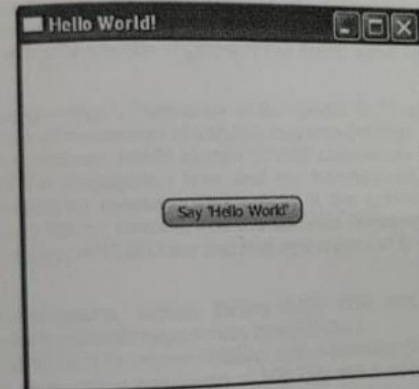
6 L2 5 1

L2 5 1

- a) With the help of a program, Illustrate any 4 strong handling functions in Java.

8 L2 5 1

- b) Write an Java FX program to create the following Layout



12 L3 5 1

Bloom's Taxonomy, L* Level; CO* Course Outcome; PO* Program Outcome

Duration: 1 Hour

17IS403 – JAVA PROGRAMMING

Max. M

Note: Answer any **One** full question from **each** Unit.

Unit – I

1. a) Implement an interface called sports which contain one float dimension called sportweight and a method that displays the sportweight. Design super class called student having members: Name and Roll Number and methods: to read and display the information. Design the subclass called Test having members: subject 1 and subject 2 and methods to read and display the marks. Design a subclass called Results the implements interface. Calculate the total result of a student including subject 1 and subject 2 and the sportweight.
- b) What is the need for synchronization? Explain with an example how synchronization is achieved in Java?
2. a) With suitable example program, demonstrate access protection in two different packages.
- b) Differentiate between Interfaces & Abstract classes in Java?
- c) Explain the use of *this* keyword?

Marks	BT*	CO*
5	L*3	
5	L2	
4	L2	
3	L2	
3	L2	

Unit – II

3. a) Explain event delegation model with suitable example.
- b) List several key methods you use when working with Frame windows with their general forms.
4. a) Which is the package that contains all the classes and methods required for even handling in Java? Also Give the description for each class.
- b) Write a applet program to draw oval and fill color.

8	L3	
2	L2	
4	L2	
6	L3	

BT* Bloom's Taxonomy, L* Level; CO* Course Outcome; PO* Program Outcome

NMAM INSTITUTE OF TECHNOLOGY, NITTE

(An Autonomous Institution affiliated to VTU, Belagavi)

Fourth Semester B.E. (ISE) (Credit System) Degree Examinations

Make up / Supplementary Examinations - September 2021

19IS403/16IS501 – JAVA PROGRAMMING

Note: Answer any **Five** full questions.

Max. Marks: 100

	Marks	BT*	CO*	PO*
1. Explain the advantages and features of Java Programming language.	10	L*2	1	2
2. With a help of program, explain method overloading in Java.	10	L2	1	1
3. With a pseudocode, illustrate the following: i) Constructors ii) this Keyword iii) static classes	10	L2	1	2
4. Explain on the term 'Objects as Parameters'. Illustrate with the help of a program.	10	L3	1	1
5. What do you mean by 'Abstract' Classes in java? Explain its relevance in method overriding with relevant pseudocodes.	10	L2	2	1
6. Explain exception handling mechanism in Java with a program.	10	L3	2	2
7. Explain the different access modifiers in java. Also, explain the relevance in declaring variables.	6	L2	2	2
8. How do you create custom exceptions in java? Explain with a relevant program.	10	L2	2	1
9. Multiple Inheritance is supported in Java. Justify.	4	L2	2	1
10. How does Java handle threads? Explain with a program that creates 3 threads. Also Illustrate the usage of <i>isAlive()</i> and <i>join()</i> method with respect to threads.	8	L2	3	2
11. Differentiate between Byte Streams and Character Streams in java by detailing their subclasses with proper pseudocodes.	12	L2	3	2
12. Write a program in java to illustrate the usage of the following concepts in threads 1. Synchronization 2. Suspending 3. Resuming	12	L3	3	1
13. With a help of a program, illustrate inter-thread communication in Java.	8	L2	3	2
14. With the help of program, Illustrate the usage of the following collection Interface. i) Linked List ii) HashSet iii) Set Interface	12	L2	4	1
15. Demonstrate the usage of Iterators and Comparators with the help of programs.	8	L2	4	2

P.T.O.

Fourth Semester B.E. (ISE) (Credit System) Degree Examinations
April - May 2019

17IS403 – JAVA PROGRAMMING

Max. Marks: 100

3 Hours

Note: Answer **Five full** questions choosing **One full** question from **each Unit**.

Unit – I

	Marks	BT*	CO*	PO*
a) Create an abstract class shape with abstract method Area and two integer dimensions. Extend this class to inherit three more classes Rectangle, Triangle and Square which implements the Area method. Show how the Area can be computed dynamically during run time for Rectangle, Square and Triangle	7	L*2	1	
b) Implement stack operations using interfaces.	7	L2	1	
c) Explain the type conversion in Java with an example.	6	L1	1	

a) Create a class 'customer' for a bank. Class 'account' should inherit the properties of 'customer' and having type of account and interest rate as members. Use constructors in base and derived class to initialize the data members. An account may be created with zero initial deposit. (Use default arguments, super keyword). Implement the methods Deposit (), Withdraw (), and Get_Balance() to operate on account.	7	L2	1	
b) Implement Matrix Multiplication using Multithreading concept in java.	7	L2	1	
c) Write a program to illustrate variable length arguments.	6	L2	1	

Unit – II

a) List and Implement any four methods of the MouseListener Interface.	7	L1	2	
b) What are Applets? With the help of a diagram, give the sequences of events which occur in Applet?	7	L1	2	
c) Write a Window based Java program to compute the Interest payment of a Loan. Based on the Loan Amount, compute the interest rate and the number of years. Interest is calculated based on type of loan, Rate of Interest for different loan as shown below: Agriculture Loan: 3%, Mudra Loan: 5%, Education Loan: 8%	6	L2	2	
a) What is an Applet? How do you pass parameters to Applets? Give necessary example to illustrate the same using Applet.	7	L2	2	
b) Write a Java program to change the Background and foreground color based on the selection of RadioButton using applet.	7	L2	2	
c) Write a Java program to illustrate how a class can extend WindowAdapter.	6	L2	2	

Unit – III

a) Classify the difference between swings & AWT by providing suitable syntax.	7	L1		
b) Provide the syntax and usage of the following swing component. i) JButton ii) JList iii) JLabel iv) JCheckBox v) JTextField	7	L2	3	
c) Describe the usage of containers and layouts in Java swings.	6	L2	3	
a) Explain the usage of JTextArea, Jlist, JComboBox, JTable with the help of programs.	7	L2	3	

P.T.O.

Note: Answer any **One full** question from **each Unit**.

Max. Marks: 2

Unit – I

	Marks	BT*	CO*	P
a) Discuss the difference between Swing and AWT along with the key features of Swing.	3	L*2	3	
b) Write a java program using Swing to illustrate a tabbed pane. Add the panel to each tab. The first tab is titled "Cities" and contains 4 buttons. Each button displays the name of the city. The second tab is titled "Colors" and contains 3 check boxes. Each check box displays the name of the color. The third tab is titled "Flavours" and contains 1 combo box and this enables the user to select one of the 4 flavours.	7	L3	3	

a) Write a java program using Swing to create a JApplet that performs addition and multiplication. Applet Window consists of 2 Buttons labelled as Add and Mul. Add relevant event listeners for both the buttons. Along with 2 buttons it also consists of 2 text field to input the numbers and one label box to display the results. On clicking the button Add it should perform addition or if button Mul is clicked it should perform Multiplication and display suitable results.	6	L1	3	
b) Discuss any two swing components in detail.	4	L5	3	

Unit – II

a) Explain the pattern matching in php and also features of php.	4	L1	4	
b) Differentiate with the example, Get and Post method of form handling in php.	6	L5	4	
a) Write a php database connectivity application to collect Student details such as Student name, usn and course respectively. Perform insert operation to add these values into table and also display all of them.	6	L3	4	
b) Summarize how do you create a function with arguments and return types in php.	4	L2	4	

Boon's Taxonomy, L* Level; CO* Course Outcome; PO* Program Outcome

Write a Java program to read numbers provided by the user at run time, and store the average of numbers.

Unit – IV

What are the disadvantages of the following (i) Serial access files (ii) Random Access Files? How to create random access files in Java? Explain with suitable example.

Explain the usage of BufferedReader & BufferedWriter in Java programming. Give suitable example to illustrate the same.

Explain how different types of Arrays are used in PHP with an example.

Design a HTML form consisting of the following elements:

Text Box to enter name

Text Box to enter age

Submit button

Write a PHP program which reads the data from the form and when the user clicks on Submit button, data inserts into the MySQL database located at the server side. If the data is successfully inserted, then the server must send "Data Successfully Inserted" message to the browser. Else it should display appropriate error messages. (Assume that the table already exists in MySQL database)

Unit – V

Write a Java script that checks the validity of the form values for a name and phone number obtained from text widgets. Name format: lastname, firstname and middlename. First and last names must begin with uppercase letters and have atleast one lowercase letter, Phone format: plus 91, five digits ' - ' followed by next five digits.

Write a Java script to demonstrate EMI calculator which takes the principal amount, year, rate of interest from the user and display the emi details on the console.

Illustrate with a program, how event handling is applied in Javascript.

Write a Javascript to demonstrate the different string functions.

Bloom's Taxonomy, L* Level; CO* Course Outcome; PO* Program Outcome

6 L2 3 2

10 L1 4 1

10 L2 4 1

10 L1 4 1

10 L2 4 2

10 L2 5 2

10 L2 5 2

10 L2 5 1

10 L2 5 1

17IS403 – JAVA PROGRAMMING

3 Hours

Note: Answer **Five full questions** choosing **One full question** from **each Unit**.

Max. Marks: 100

Unit – I

Explain the use of static with a program.
With a code snippet, explain abstract classes.
Create a package P2. P2 contains a class multiply with a single function display, which displays the product of any number x with 5.
Create a Package P1. P1 contains class user_input which has a function get() which takes the values for x by user.
Class multiply should now import the get function from another package to compute the sum.
Demonstrate Access specifiers concept using the above program.

Marks	BT*	CO*	PO*
06	L*2	1	2
04	L2	1	1

Create a class called Order_Dinner with functions like
i) Take_Order // order taken by user
ii) Billing//displays the basic amount
Create a subclass bulk_order with the same functions as of superclass, where if the take_order would be more than 10, appropriate discounts would be given in the billing function. Make suitable assumptions.
Implement the above scenario using dynamic method dispatch concept.

10 L3 1 2

With an example explain importance of synchronization between multiple threads.

10 L3 1 2

10 L2 1 2

Unit – II

Explain Delegation Event model. Explain the following terms
i) Events
ii) Event sources
iii) Event Listeners
Write a program to display "Welcome" when the user presses any key and display "Bye", when the user releases the key.

10 L2 2 1

10 L3 2 2

Write a mouse event handling program for the following:
i) when the mouse enters the frame, display "JAVA"
ii) when the mouse is clicked, change the background color to Red
Write a program to draw rectangle, polygon, line, ellipses and circle.

10 L3 2 2

10 L2 2 2

Unit – III

Write a java Swing program to create an form with two text fields which takes name and register number. Application would have three radio buttons with text IOT, Image Processing, Machine Learning. Using the values given by the user and based on the choice of subjects, display suitable message. Assume suitable values wherever required.
Explain the terms i) Component ii) Container iii) Panel iv) Window v) Frame

10 L3 3 2

10 L2 3 1

P.T.O.

