Reg. No. : | | | | | | | | | | |

Question Paper Code: 98601

B.E./B.Tech. DEGREE EXAMINATION, MAY 2024

Sixth Semester

Information technology

19UIT601- JAVA PROGRAMMING

(Regulations 2019)

Duration: Three hours Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1.	Which component is responsible to optimize reusable byte code conversion to machine code?	CO1- U
2.	What is the purpose of JIT Compiler	CO1- U
3.	"The parameter less constructor of the parent class is invoked implicitly by the child class constructors if super() is not explicitly used in the child class constructor". Whether the statement is true.	CO3- Ana
4.	When will an object becomes eligible for garbage collection?	CO3- Ana
5.	List the types of inheritance in Java	CO1- U
6.	Differentiate Method overloading and Method overriding	CO1- U
7.	List is an interface which extends Collection interface whereas Set is a class which implements Collection interface Predict whether the above statement is true or false?	CO3- Ana
8.	What are the advantages of using packages?	CO1- U
9.	Give examples for any 4 string methods available in string class.	CO1- U
10.	Why strings are immutable?	CO1- U

PART – B (5 x 16= 80Marks)

11.	(a)	Briefly explain the primitive and non-primitive data types in java with example	CO1-App	(16)

Or

(b) Briefly explain the Selection Control statements in Java with example. CO1-App (16)

12. (a) Create a new class Restaurant in the Java project SwiftFood with the instance variables and methods mentioned below. CO2-App (16)

Instance variables	• restaurantName: String • restaurantContact: long • restaurantAddress: String • rating: float
Methods	• displayRestaurantDetails(): void

Method Description

displayRestaurantDetails()

Display the details of the restaurant (the values of the member variables)

Create an object of the Restaurant class, initialize the instance variables, and invoke the displayRestaurantDetails() method in the main() method of the Tester class

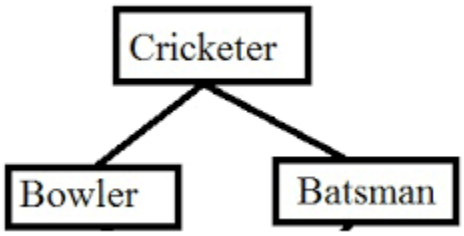
Or

(b) Create a Customer class with following data members , String customerId; String customerName; long contactNumber; String address; CO2-App (16)

Create a parameterized constructor to initialize the members.

Create two customer objects and display the details of the two customers using display_details() method.

13. (a) CO2-App (16)



Demonstrate the above case with Java code

Or

(b) EPay Wallet is a wallet application using which users can pay various bills. Users can make payments only if they have enough wallet balance. CO2-App (16)

There are two kinds of users – User and PremiumUser. PremiumUser gets reward points for every payment.

Method Description

User

User(int id, string userName, String emailId, double walletBalance)
Initialize the instance variables with the values passed to the constructor.
makePayment(double billAmount)
Make the payment by deducting the billAmount from walletBalance if and only if sufficient walletBalance is available.
Return true if the payment is successful
Return false if the walletBalance is insuffcient
Implement the appropriate getter and setter methods.

PremiumUser

PremiumUser(int id, string userName, String emailId, double walletBalance)
Initialize the instance variables with the values passed to the constructor.
makePayment(double billAmount)
Override the parent method to make payment as well as to credit reward points to the user.
If the payment is successful, add 10% of the billAmount as rewardPoints
Return true if the payment is successful, else return false
Implement the appropriate getter and setter methods.

Write the Java code to implement the above scenario

14.	(a)	How Exception is handled in Java. Give suitable illustrations	CO1-U	(16)
		Or		
	(b)	What are Packages. How to create a Package in Java. Give examples	CO1-U	(16)
15.	(a)	Write a java program to find the count of the highest occurring character in the string passed to the method and return the count. Test the functionalities using the main() method of the Tester class.	CO2- App	(16)

Sample Input	Expected Output
success	3
associated	2

Or

(b) Write a java program to remove all the duplicate characters and white spaces from the string passed to the method and return the modified string. CO2- App (16)

Test the functionalities using the main() method of the Tester class.

Sample Input	Expected Output
object oriented programming	objectrindpgam
hello world	helowrd