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Question Paper Code: 99273

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

Open elective

Civil Engineering

19UCS973– JAVA FUNDAMENTALS

(Common to ECE, EEE, EIE, Mechanical, IT, Chemical, Agri, Bio medical, CSBS & Biotechnology branches)

(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5Marks)

1. When an array is passed to a method, what does the method receive? CO1-U
(a) Reference Array (b) Copy of Array
(c) Length of Array (d) Copy of first Element
2. Which loop guaranteed to execute at least one time? CO1- U
(a) for (b) do-while (c) while (d) All of the above
3. What is true about constructor? CO1-U
(a) It can contain return type (b) It can take any number of parameters
(c) It can have any non access modifiers (d) Constructor cannot throw an exception
4. What are the features reused using Inheritance in Java? CO1- U
(a) Variables (b) Constants (c) Methods (d) All the above
5. In java a Thread can be created by _____ CO1- U
(a) Extending the thread class. (b) Implementing Runnable interface
(c) Both of the above (d) None of the above

PART – B (5 x 3= 15Marks)

6. What is an array? Why do we use array? CO1- U

7. Raja wishes to find whether the year is leap year or not? Write a java Program to help Raja to find it? CO2- App
8. What is Method in java? write an example using methods? CO1- U
9. Bala wishes to do program using try, catch and finally. Write a java program which help Bala to complete the java program? CO2- App
10. Write a code to draw Rectangle in java using Applet? CO2- App

PART – C (5 x 16= 80 Marks)

11. (a) Explain Genesis of Java in detail? CO1- U (16)
Or
(b) Explain about the Various Data types available in java? CO1- U (16)
12. (a) Explain about the various Control Statement Selection used in java with an Example program? CO1- U (16)
Or
(b) Explain about Class Fundamentals and Write an Example using class? CO1- U (16)
13. (a) Create a class called Employee having the following data members. An ID for storing unique id allocated to every employee, Name of employee, age of an employee. Constructor to initialize name and age. The ID should be initialized in this constructor. A method show() to display ID, name, and age. A method showNextId() to display the ID of the next employee. Write a java program by using Garbage Collector and Explain about the Garbage Collector in java? CO2- App (16)
Or
(b) (i) James needs to find the factorial of the numbers without using loops. Write a java program to help James to find the factorial of the numbers without using loops? CO2- App (8)

(ii) Ashwin has need to write the assignment in java program in such a way that he need to write the java program to return object by decrementing the value by 10 by using 3 objects. Write the java program to implement the above scenario to help Ashwin to complete his assignment. CO2- App (8)

14. (a) (i) Alwin does an assignment using the concept of Method overriding by considering two classes named Vehicle and Bike. Write a java program to help Alwin to complete the program? CO2- App (8)
- (ii) Akbar needs to do the assignment using super keyword with methods. He does needs to call and print the same message of the parent class in child class. Write java program to help Akbar to complete the task. CO2- App (8)
- Or
- (b) (i) Ramu wishes to find the calculation of Area of circle and rectangle using interfaces. Write java program to complete the task. CO2- App (8)
- (ii) Ansar needs to do a java program in such a way that write a java program that gives example by using Arthimetic Exception. Write java program to help Ansar to complete the task. CO2- App (8)
15. (a) Explain the concept of Inter Thread Communication in detail with an example? CO1- U (16)
- Or
- (b) What is Applet in java? Explain the concept of Applet with example? CO1- U (16)

