U.S.N.

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

February / March 2023 Semester End Main Examinations

Programme: B.E.   Semester: V
Branch: Artificial Intelligence and Machine Learning   Duration: 3 hrs.
Course Code: 22AM5PCOPJ   Max Marks: 100
Course: Object Oriented Programming using Java   Date: 21.02.2023

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

1	a)	List and Explain Java Buzzwords.	**6**
	b)	Demonstrate the method overloading with suitable example.	**7**
	c)	Explain different ways of passing arguments to functions with an example.	**7**

UNIT - II

2	a)	Write a java program to perform employee payroll processing using packages. In the java file names emp.java creates a class called emp. Declare the variables name, empid, category, bpay, hra, da, npay, pf, grosspay, incometax and allowance. Write suitable methods to assign values to data members. Create an object e to invoke methods and print the values of data members.	**10**
	b)	How to design and implement interfaces in java? Illustrate with an example.	**10**

OR

3	a)	Define Package. Describe the various levels of access protections available in java and their implications with suitable examples.	**10**
	b)	With an example, explain how interface can be used to achieve multiple inheritance in Java.	**10**

UNIT - III

4	a)	Distinguish between byte stream classes and character stream classes.	**6**
	b)	What are Strings? How they are constructed using string constructors.	**6**
	c)	Write a java Program to i. Compare two Strings ii. Reverse a given string	**8**

UNIT - IV

5 a) Explain the exception handling keywords in java with example. **4**

b) Define Exception. Write a program which contains one method and will throw Illegal Access Exception and use proper exception handlers so that exception should be printed in the calling function. **8**

c) Write a java program that implements a multithreaded application that has 3 threads. First thread generates random integer for every 1 second and if the value is even second thread performs square of the number and prints the same. If the value is odd, the third thread will print the cube of the number. **8**

OR

6 a) Define java threads. Explain two ways of creating a thread. **8**

b) Develop a program to show Synchronization in java. **6**

c) With syntax and examples explain the uses of isAlive () and Join () methods. **6**

UNIT - V

7 a) What is an event class? list and explain event classes available in java. **8**

b) Discuss delegation event model with suitable example. **6**

c) Define an Applet. Write a program to demonstrate simple Applet. **6**

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