Name: **Enrolment No:**	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Java Programming / CSEG 313 **Semester: VII**
Programme: B. Tech. Electronics
Time: 03 hrs. **Max. Marks: 100**
Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Why Exception handling is important?	**4**	**CO3**
Q 2	Name various branching statements of java with proper syntax.	**4**	**CO 1**
Q 3	Draw the lifecycle of a thread.	**4**	**CO 4**
Q 4	What are the usage of Final variables and methods? Write the proper syntax.	**4**	**CO 2**
Q 5	What are various advantages of using Package in java?	**4**	**CO 2**
	SECTION B		
Q 6	Write a program to implement Multiple Inheritance using Interfaces. Also, explain the process.	**10**	**CO 3**
Q 7	What is String class? Why is it used? Give example.	**10**	**CO 3**
Q 8	What is constructor? Write down its various features and different types of syntax. Also, write an program code for parameterized constructor.	**10**	**CO 2**
Q 9	What are the various types of Exceptions in Java? Explain custom exception with suitable program.	**10**	**CO 3**
	SECTION-C		
Q 10	a. How can we create a string object? Compare and contrast mutable and immutable strings in Java with program code. b. Differentiate between throw and throws with suitable example.	**10** **10**	**CO 3**
Q 11	What are the various ways of creating a thread? How can you add synchronization in Java's thread? Illustrate with example.	**20**	**CO 4**

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SECTION A

S. No.		Marks	CO
Q 1	What is the architecture of JVM?	4	CO1
Q 2	Discuss the various features of java.	4	CO1
Q 3	What are different types of exceptions?	4	CO3
Q 4	Java is platform independent language. How?	4	CO1
Q 5	What are the various ways of creating a thread?	4	CO4
	SECTION B		
Q 6	How can we handle the exceptions in Java? Write a program to demonstrate custom exception.	10	CO3
Q 7	Explain Packages, Scanner Classes, and Stream classes with example.	10	CO2+ CO3
Q 8	Compare and contrast between String, StringBuffer and StringBuilder. Write a program to demonstrate all.	10	CO3
Q 9	Differentiate between Abstract class and an Interface with suitable program.	10	CO3
	SECTION-C		
Q 10	Write a program in Java to create a class 'Box' which contains three data members for holding width, height and length of box and two methods 'area' and 'volume' to calculate and return the area and volume of box. Create another class named 'BoxDemo' which uses Box class. i. Demonstrate the use of overloaded constructors. ii. Calculate the area and volume of box.	10 10	CO2
Q 11	How can you lock an object for any shared resource? Write a program, which demonstrate it.	20	CO4