Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2019

Programme Name: BT-Mechatronics **Semester: 8th**
Course Name: Java Programming **Time: 03 hrs**
Course Code: CSEG313 **Max. Marks: 100**
Nos. of page(s): 2
Instructions: Follow instructions of section A, B and C.
Answer all questions serially

SECTION A

NOTE:-Attempt all Questions

No.		Marks	CO
Q 1	How java virtual machine works? Write a program for polymorphism?	**4**	**CO1**
Q2	Why does not support multiple inheritance? Explain with example.	**4**	**CO2**
Q3	What is encapsulation and thread? Write a program for encapsulation.	**4**	**CO3**
Q4	What is AWT (Explain with a program)? Why it is called as Heavy weight process?	**4**	**CO4**
Q5	Explain the architecture of RMI based clients and server.	**4**	**CO4**

SECTION B

NOTE:- Question no 6, 7, 8are compulsory
Anyone can be solved in Question 9

Q6	Discuss about parameterized constructor? How an object uses the constructor to access data fields and method? Write a program to print complex number (Eg: 2+3i).	**10**	**CO1**
Q7	Discuss thread synchronization? Write a program to print 1 to 10 using two threads.	**10**	**CO3**
Q8	Discuss about abstraction? How abstraction works in Java (Explain with proper program)?	**10**	**CO3**
Q9	Explain the JDBC and object serialization. Explain how SQL works to retrieve the information from data base.	**10**	**CO5**
	OR		
	Explain the Collection API and its package?	**10**	**CO5**

SECTION-C

NOTE:- Question no 10 is compulsory
Anyone can be solved in Question 11

Q10	Discuss about constructor and object? Write a program for Calculator (Show one OOPs feature).	**20**	**CO3**
Q11	Discuss about AWT components, Layout Managers, AWT events, Adapters. Write a simple program to create a layout and event using AWT programming.	**20**	**CO4**
	OR		

	How to improve the performance of the following code? Explain your answer and show the new lines(s) of code. **int i;** **URL url = new URL("http://java.sun.com/");** **URLConnection javaSite = url.openConnection();** **InputStream input = javaSite.getInputStream();** **InputStreamReader reader = new InputStreamReader(input);** **While ((i = reader.read()) != -1){** **System.out.println(i);** **}**	**20**	**CO4**

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SECTION A

NOTE:-Attempt all Questions

No.		Marks	CO
Q 1	What is java virtual machine? How Java is platform independent?	**4**	**CO1**
Q2	What is multi-level inheritance? Explain with a program.	**4**	**CO2**
Q3	What is Run time polymorphism? In which case time polymorphism run is helpful.	**4**	**CO3**
Q4	Explain the uses of File I/O for creation. Write a program to create a file.	**4**	**CO4**
Q5	Explain uses of JDBC and SQL.	**4**	**CO5**

SECTION B

NOTE:- Question no 6, 7, 8are compulsory
Anyone can be solved in Question 9

Q6	Why constructor does not have return value? Write a program to show how object is instantiate by constructor.	**10**	**CO1**
Q7	Explain how thread works in a java program? Write a proper program to handle two threads.	**10**	**CO3**
Q8	Explain multi-level inheritance? (Explain with a proper program)	**10**	**CO3**
Q9	Explain Remote method invocation. Using client server model define complete process.	**10**	**CO5**
	OR		
	Explain the uses of Collection API and its package?	**10**	**CO5**
	SECTION-C **NOTE:-** Question no 10 is compulsory Anyone can be solved in Question 11		
Q10	How method overloading works? Write a program to check implementation of constructor overloading and method overloading.	**20**	**CO3**
Q11	Explain AWT components, Layout Managers, AWT events, Adapters. Write a simple program to create a layout and event using AWT programming.	**20**	**CO4**
	OR		
	How to improve the performance of the following code? Explain your answer and show the new lines(s) of code. **int i;** **URL url = new URL("http://java.sun.com/");** **URLConnection javaSite = url.openConnection();** **InputStream input = javaSite.getInputStream();** **InputStreamReader reader = new InputStreamReader(input);** **While ((i = reader.read()) != -1){** **System.out.println(i);** **}**	**20**	**CO4**