UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2019

Programme Name: BT-CSE-DevOps and Bigdata   **Semester:4th**
Course Name: Object Oriented Programming through Java   **Time: 03hrs**
Course Code: CSEG2013   **Max. Marks: 100**
Nos. of page(s): 2
Instructions: Follow instructions of section A, B and C.
                   <u>**Answer all questions serially**</u>

SECTION A

NOTE:-Attempt all Questions

No.		Marks	CO
Q 1	How java virtual machine works? What is token in Java and what are elements are supported by it?	4	CO1
Q2	Why java does not support multi-dimensional array? Explain with example.	4	CO2
Q3	What is the difference between constructor and method?What is the difference between frame work and api?	4	CO3
Q4	What is AWT (Explain with suitable Example)? Why it is Called as Heavy weight process?	4	CO4
Q5	Explain the steps to create RMI based clients and server.	4	CO4

SECTION B

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

Q6	What is parameterized constructor? How object uses the constructor to access data fields and method? Write a program to print complex number (Eg: 2+3i).	10	CO1
Q7	What is thread synchronization? Write a program to create two threads, one thread will print odd numbers and second thread will print even numbers between 1 to 20 numbers.	10	CO3
Q8	Write a java program to implement multilevel inheritance with 4 levels of hierarchy.	10	CO3
Q9	Explain the basic components of JDBC. Explain in detail the different drivers of JDBC.	10	CO5
	OR		
	Explain the architecture of Remote Method Invocation(RMI) and its package?	10	CO5

SECTION-C

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

Q10	A client has requirement for on-line ticket booking system. Design a efficient solution for client to fulfill following aspects as given below; (Describe the solution and Program)
	   1. Multiuser
	   2. Booking confirmation (Ticket no, and seat no)
	   3. Transaction failure notification
	   4. Ticket cancellation with refund confirmation
		20	**CO3**

Q11	A retail management company wants software for their stock management. Using, Java design a program to fulfill all requirement of retail Management Company.
	   1. Stock availability
	   2. Stock consumption
	   3. Stock distribution
	   4. Employee work load for stock distribution
		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	Describe the for access regimes from public to private that may be applied to Java fields and methods. Why are they useful?	4	CO1
Q2	Why do we need a finalize() method when Garbage Collection is there? Can methods be overloaded based on the return types?	4	CO2
Q3	What is the difference between abstract class & Interface? Give proper example.	4	CO3
Q4	What is mean by a Thread? What is mean by multi-threading? Explain vector, space.	4	CO3
Q5	How can you find the length and capacity of a string buffer? How to compare two strings?	4	CO5

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

Q6	Why Object is super class in Java? Write a program to show Object is super class in Java.	10	CO1
Q7	When you extend a class, the constructor for your new class will reference the constructor of the parent class, and this latter constructor may have any of the four possible access regimes. Comment on the consequences of each of the four possibilities. If the only constructor for a class is marked as private, is it ever possible to have an instance of that class or any subclass of it? Explain why or why not.	10	CO2
Q8	What is method overloading and method overriding? How java resolves call to overridden method at run time (Give one example)?	10	CO3
Q9	Explain the architecture of Remote Method Invocation(RMI) and its package?	10	CO4
	OR		
	Explain the basic components of JDBC. Explain in detail the different drivers of	10	CO5

	JDBC.		
	SECTION-C		
	NOTE:- Question no 10 is compulsory		
	Anyone can be solved in Question 11		
Q10	Design a program to analyze the sentence. Consider following aspect during design of program, it can find positive and negative sentences, context of sentences. (Eg: Commentary of Cricket)	**20**	**CO3**
Q11	In Airport baggage loss is one of the major issues (due to same type of baggage appearance). We have to design a solution to relocate the baggage to the passenger. (Design an optimum algorithm to justify the solution).	**20**	**CO5**
	OR		
	A client has requirement for on-line ticket booking system. Design an efficient solution for client to fulfill following aspects as given below; (Describe the solution and Program) 1. Multiuser 2. Booking confirmation (Ticket no, and seat no) 3. Transaction failure notification 4. Ticket cancellation with refund confirmation	**20**	**CO5**