D   **S2012**   **Pages: 2**

Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FOURTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018
Course Code: CS206
Course Name: OBJECT ORIENTED DESIGN AND PROGRAMMING (CS)

Max. Marks: 100   Duration: 3 Hours

PART A
Answer all questions, each carries 3 marks.
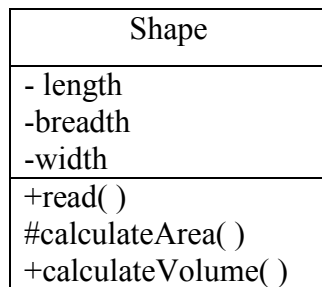Marks

1	Draw the Use Case diagram of online railway ticket reservation system	(3)
2	Why are java programs said to be platform independent?	(3)
3	What is a constructor? What are its uses?	(3)
4	Why is the *main* method in java qualified as public, static, and void?	(3)

PART B
Answer any two full questions, each carries 9 marks.

5   a)   Represent the following class diagram as a java class.   (5)

Shape
- length
-breadth
-width
+read( )
#calculateArea( )
+calculateVolume( )

     b)   Write briefly about any fourfeatures of Java.   (4)

6   a)   Write a java program to check whether a given number is prime or not.   (4)

     b)   Show the use of different types of shift operators in java with the help of suitable examples.   (5)

7   a)   Draw a table showing the visibility of all access specifiers available in java language with respect to; same class, same package sub-class, same package non sub-class, different package sub-class, different package non sub-class.   (6)

     b)   Is it possible create an object for a class A using, A ob = new A(); if the class contains only parameterized constructor? Justify.   (3)

PART C
Answer all questions, each carries 3 marks.

8	Does importing a package makes available all classes, interfaces and sub-packages within it? Justify.	(3)
9	What are the uses of "*finally*" statement in exception handling?	(3)

| 10 | List the sub-classes of Writer and Reader character oriented stream classes | (3) |

| 11 | Draw the lifecycle of a thread showing the different states and methods invoked. | (3) |

PART D
Answer any two full questions, each carries 9 marks.

12

   a) Differentiate between Abstract class and Interface   (4)

   b) Explain the scenario under which the following three exceptions occur, NumberFormatException, ArithmeticException, and ArrayIndexOutOfBoundsException.   (5)

13 a) Write a java program to create two threads, one for writing odd numbers and another for writing even numbers up to 100 into two different files.   (6)

   b) What are the uses of "*synchronized*" keyword?   (3)

14 a) Demonstrate how polymorphism can be implemented using method overriding with suitable example.   (6)

   b) What is an exception? Why it needs to be handled?   (3)

PART E
Answer any four full questions, each carries 10 marks.

15 a) Explain briefly about the Delegation Event model.   (5)

   b) List any five event sources and their corresponding generated event typeand listeners used.   (5)

16 a) Describe the different character extraction methods of String class along with their syntax.   (5)

   b) How does an applet differ from a java application?   (5)

17 Write a java program to count the occurrence of a particular word within a sentence using string handling methods.   (10)

18 Write a java AWT based program to display Fibonacci numbers in a List control up to a limit entered using TextField. The event handling as well as code for clearing the components must be provided.   (10)

19 a) What are the advantages of using Swings?   (4)

   b) Explain any three graphics related methods along with their syntax.   (6)

20 Write the steps for connecting a java program to a database, executing a select query, and fetching the results with sample code.   (10)

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