

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 <i>main</i> 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 four features 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 type and 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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