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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FOURTH SEMESTER B.TECH DEGREE EXAMINATION, JULY 2017

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.

- 1 What are advantages of using UML? (3)
- 2 Illustrate the steps involved in Java compilation. (3)
- 3 Differentiate between a class and an object. (3)
- 4 Explain briefly about method overloading with an example. (3)

PART B

Answer any two questions. Each carries 9 marks.

- 5 Represent the following entities using UML class diagram
i) Book ii) Employee iii) Vehicle(9)
- 6 Construct Use Case diagrams for the following
i) ATM ii) Library iii) Railway reservation(9)
- 7 Write a Java program to calculate the area of different shapes namely circle, rectangle, and triangle using the concept of method overloading.(9)

PART C

Answer all questions. Each carries 3 marks.

- 8 Differentiate between abstract class and an interface. (3)
- 9 What is an exception? How is it handled? (3)
- 10 Illustrate the character stream class hierarchy. (3)
- 11 What are the uses of synchronized keyword in Java? (3)

PART D

Answer any two questions. Each carries 9 marks.

- 12 a) What is a package? (2)
- b) What are the advantages of using a package? (3)

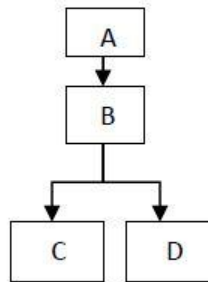
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c) Write the steps and java code for creating a package named “AdMath” containing a method to calculate the factorial of a number passed to it.(4)

13 a) What are the advantages of inheritance? (3)

b) Show how the following inheritance hierarchy can be implemented in Java. (3)



c) Does Java support multiple inheritance? Justify your answer. (3)

14 a) what are the advantages of multi-threading in Java? (3)

b) Illustrate the two ways of creating threads in Java with the help of examples? (6)

PART E

Answer any four questions. Each carries 10 marks.

15 a) Explain the working of the Delegation Event Model. (5)

b) Write down the various event sources and their corresponding listeners. (5)

16 a) What are the features of an applet? (5)

b) Illustrate the different parts of an applet tag. (5)

17 Write a Java program to check whether a given string is palindrome or not without using built in methods.(10)

18 Write a GUI based Java program to check whether a given number. is prime or not. Use appropriate AWT components and event handling. (10)

19 a) What are the advantages of using Swing API? (5)

b) List any five Containers and Components available in Swing API. (5)

20 Explain the steps using java code for connecting a Java program to a database using JDBC API.(10)
