

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name : Object Oriented Programming with Java

Subject Code : 4TE04OPJ1

Branch: B.Tech (CE, IT)

Semester : 4

Date : 08/05/2018

Time : 10:30 To 01:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q-1 Attempt the following questions: (14)

- a) What is garbage collection in Java?
- b) Write use of keyword import.
- c) Explain keyword this.
- d) Explain method parseInt ().
- e) Explain right-shift operator.
- f) What is Applet?
- g) What is Collection in Java?
- h) There is no destructor in Java. Justify.
- i) Explain finalize () method in Java.
- j) Explain use of throw and throws in Exception Handling.
- k) JVM is platform dependent. Justify.
- l) What is the use of Interface in Java?
- m) How update () method works in Applet?
- n) What is canvas?

Attempt any four questions from Q-2 to Q-8

Q-2 Attempt all questions

- (a) Explain following features of Java in detail. 1) Multithreaded, 2) Architecture-neutral, 3) High Performance, 4) Interpreted, 5) Dynamic, 6) Distributed, 7) Portable (07)
- (b) Explain life cycle of an Applet. Also illustrate how to provide parameters to Applet through html. (07)

Q-3 Attempt all questions

- (a) Write a program to display a random integer between 5 and 10 every three seconds. (05)
- (b) Differentiate between abstract class and interface in Java. (03)
- (c) Explain public, private, protected and default modifiers in Java with suitable example. (06)

Q-4 Attempt all questions

- (a) What is constructor? Explain Constructor overloading with suitable example. (07)
- (b) Write an applet that contains three buttons OK, CANCEL and HELP and one text field. If OK is pressed shown on the status bar-“OK is pressed” and the text field should turn red. When CANCEL is pressed -shown on the status bar- “CANCEL is pressed “and text field (07)



should turn green. When HELP is pressed shown on the status bar-“HELP is pressed” and the text field should turn yellow.

Q-5

Attempt all questions

- (a) Explain use of keyword final by giving suitable examples. (03)
- (b) Differentiate the followings: (04)
- (i) Checked and Unchecked Exceptions
 - (ii) Constructor and method
- (c) Explain thread synchronization in Java with join() and isAlive() methods. (07)

Q-6

Attempt all questions

- (a) Explain Thread Life Cycle in detail. Write a code to create Thread in JAVA. (07)
- (b) Explain dynamic method dispatch with suitable example. (07)

Q-7

Attempt all questions

- (a) Explain in detail use of adapter class, inner class and anonymous inner class with suitable example. (07)
- (b) Explain method overriding in Java. Describe an abstract class called Shape which has three subclasses say Triangle, Rectangle and Circle. Define one method area() in the abstract class and override this area() in these three subclasses to calculate for specific object i.e. area() of Triangle subclass should calculate area of triangle etc. Same for Rectangle and Circle (07)

Q-8

Attempt all questions

- (a) List and explain different types of layout. Write a program that implements Border Layout, Flow Layout and Grid Layout using panel. (07)
- (b) Write a complete program to accept N integer numbers as command line arguments. Raise and handle exceptions for following cases : (07)
- when a number is -ve.
 - when a number is evenly divisible by 10
 - when a number is greater than 1000 and less than 2000
 - when a number is greater than 7000
- Skip the number if an exception is raised for it, otherwise add it to find total sum.

