S.Y. B.Sc. (IT) : Sem. IV

Core Java

Time : 2½ Hrs.] Prelim Question Paper **[Marks : 75**

Please check whether you have got the right question paper.

N.B.: (1) All questions are compulsory.
(2) Make suitable assumptions wherever necessary and state the assumptions made.
(3) Answers to the same question must be written together.
(4) Numbers to the right indicate marks.
(5) Draw neat labeled diagrams wherever necessary.
(6) Use of Non-programmable calculators is allowed.

1. Attempt any **THREE** of the following : **[15]**
(a) Write short note on History of Java language.
(b) Explain difference between JDK, JRE and JVM.
(c) Explain the features of Java.
(d) Explain any five String methods.
(e) Write short note on Autoboxing and Unboxing.
(f) How do you compile and interpret Java program?

2. Attempt any **THREE** of the following: **[15]**
(a) Write a short note on for each statement with an example.
(b) Write a short note on Garbage Collection in Java.
(c) What is Method overloading ? Explain with the help of a program.
(d) Write a short note on Object Oriented Programming.
(e) Explain types of constructors in Java.
(f) Write short note on Static variable in Java.

3. Attempt any **THREE** of the following: **[15]**
(a) Define Inheritance. Explain its types.
(b) Write a program to demonstrate Multiple Inheritance.
(c) What are packages? Give the advantages of Packages.
(d) What is an Abstract class? Explain with a suitable java code.
(e) Write short note on "this" keyword in Java.
(f) Explain use of "super" as a constructor in Java.

4. Attempt any **THREE** of the following: **[15]**
(a) Write short note on Vectors.
(b) Explain Thread life cycle.
(c) Write a program to accept two numbers from the user and perform division of them. Use multiple try-catch block to catch ArithmeticException, NumberFormatException, etc.
(d) What are Checked and Unchecked Exceptions in Java.
(e) Explain use of "finally" block in exception handling.
(f) Write a Java program to implement Multithreading.

5. Attempt any **THREE** of the following: **[15]**
(a) Design an AWT program to print the factorial of an input value.
(b) Design an AWT program to perform various string operations like string reverse, string concatenation, etc.
(c) What are Applets in Java.
(d) What are Layouts? Explain GridLayout with an example.
(e) Explain Adapter classes.
(f) Explain the delegation event model.

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S.Y. B.Sc.IT Sem-IV: Paper Discussion Schedule

Date	Day	Timing	Centre
18 April. 2018	Wednesday	5.00 p.m. to 7.00 p.m.	Andheri
19 April. 2018	Thursday	9.00 a.m. to 11.00 a.m.	Dadar
19 April. 2018	Thursday	5.00 p.m. to 7.00 p.m.	Borivali
19 April. 2018	Thursday	9.00 a.m. to 11.00 a.m.	Thane
19 April. 2018	Thursday	4.00 p.m. to 6.00 p.m.	Nerul