

**5/H-73 (vi)(c) (Syllabus-2015)**

**2017**

( October )

**COMPUTER SCIENCE**

( Honours )

( **Object-Oriented Programming through Java** )

( CS-502 CT )

*Marks : 38*

*Time : 2 hours*

*The figures in the margin indicate full marks  
for the questions*

Answer **one** question from each Unit

**UNIT—I**

1. (a) What do you understand by **Abstraction**? Give an appropriate example. 2+1=3
- (b) Briefly explain the following : 2+1+2=5
- (i) Constructor
  - (ii) *this* keyword
  - (iii) Command-line argument

( 2 )

2. (a) What are classes and objects? Illustrate with an example how objects are passed to and returned from methods. 2+3=5
- (b) Briefly discuss widening and narrowing conversions between Java's built-in data types. 3

UNIT—II

3. (a) How do subclasses call their superclass constructors? 2
- (b) Explain in detail the two ways of creating threads and using the `join()` method to ensure the threads have terminated. 3+3=6
4. (a) What is a package? Discuss the various levels of access protection available for packages. 1+4=5
- (b) Describe the `try`, `catch` and `finally` blocks used in exception handling. 3

UNIT—III

5. (a) What are generics? With the help of an example, explain how to create and use a generic class. 1+4=5

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( Continued )

( 3 )

- (b) Differentiate between `String` class and `StringBuffer` class. 2
6. (a) Define a stream. Briefly describe the two streams provided by Java for I/O. How can you check whether a file exists or not? 1+3+1=5
- (b) What do you understand by the collections framework? 2

UNIT—IV

7. (a) What is an applet? How do you place an applet into a web page? How can an appropriate message be displayed if the browser can recognize a Java applet but cannot run it? 1+2+1=4
- (b) What are anonymous inner classes? 3
8. (a) Define an event and describe the delegation event model elaborating the role of sources and listeners. 5
- (b) What is the purpose of the `repaint()` method in an applet? 2

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( Turn Over )

UNIT—V

9. (a) How do you create sockets on the server and client side with—
- (i) TCP/IP;
  - (ii) UDP? 2+2=4
- (b) Specify the steps in establishing a connection to a database using JDBC. 4
10. (a) What is a servlet? Describe the three methods that are central to the life cycle of a servlet. Highlight any two advantages of servlets over CGI scripts. 1+3+2=6
- (b) What do you understand by the **InetAddress** class? 2

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