



Time Allotted : 3 Hours

Full Marks :70

The Figures in the margin indicate full marks.  
Candidate are required to give their answers in their own words as far as practicable

**Group-A (Very Short Answer Type Question)**

1. Answer any ten of the following :

[ 1 x 10 = 10 ]

- (i) What is aggregation?
- (ii) What is Inheritance?
- (iii) What is the name of the Java file containing the following program?  
import myLibrary.\*;  
public class ShowSomeClass  
{  
// Code of the class...  
}
- (iv) What is bytecode?
- (v) what is default access specifier?
- (vi) What is the difference between 'Exception' and 'error' in java?
- (vii) What is link?
- (viii) What is Data hiding?
- (ix) What is the difference of Object and Object reference?
- (x) int values[] = {1, 2, 3, 4, 5, 6, 7, 8};  
for(int i=0; i<X; ++i)  
System.out.println(values[i]);  
Referring to the above, what value for X will print all members of array "values"?
- (xi) What is Message Passing?
- (xii) What will be the output of the following code segment?  
public class Trial  
{  
int x;  
public static void main(String args[])  
{  
x = 8;  
System.out.println(x);  
}  
}

**Group-B (Short Answer Type Question)**

Answer any three of the following

[ 5 x 3 = 15 ]

2. Differentiate major and minor elements with example. [ 5 ]
3. Write differences between Object Oriented Programming and other conventional programming? [ 5 ]
4. What is an exception? Explain with an example, how exceptions are handled in java? [ 5 ]
5. Distinguish between Abstract class and Interface. [ 5 ]
6. "Java does not support destructors", Discuss. What is 'this' keyword? Explain with an example. [ 5 ]

**Group-C (Long Answer Type Question)**

Answer any three of the following

[ 15 x 3 = 45 ]

7. (a) Differentiate Generalization and Specialization with example.  
(b) Explain Degree of an Association with example.

- (c) Explain Cardinality Relations of Associations with example. [4]
8. (a) Explain polymorphism with suitable example. [5]  
(b) What are the advantages and disadvantages of OOP? [5]  
(c) Explain differences between Abstraction and Encapsulation. [5]
9. (a) What is thread? [2]  
(b) How do we set the priorities for thread? Describe with an example. [8]  
(c) Write a small program which will synchronize among two threads. [5]
10. (a) Explain method overloading with example. [8]  
(b) Explain Autoboxing and Unboxing with example. [7]
11. (a) What are the uses of exception handling in JAVA? [2]  
(b) Write a program using java that handles an exception "Entry of negative age of person". [4]  
(c) Write a multithreading program to generate the square roots of the first 30 natural numbers using Runnable Interface. [6]  
(d) What do you mean by 'Synchronization'? Why do we need it? [3]

\*\*\* END OF PAPER \*\*\*

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