

2020

B.C.A

[HONOURS]

Paper : BCA-305

Full Marks : 80

Time : 4 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*Answer **Q. No. 1** and any **four** from the rest.

1. Answer any **eight** questions: 2×8=16
- Why main () is static in Java?
 - Define data abstraction.
 - Give example of inner class.
 - What is package?
 - How '.' (dot) operator is used in Java?
 - How a class is differ from structure in C?
 - How run time polymorphism is achieved in Java?
 - Define constructor.

- Defien synchronization.
 - Write the purpose of finally block.
 - What are arithmetic operators available in Java?
 - Write the purpose of notify () method in Java.
2.
 - Discuss the relationship between class and object.
 - How objects are created in Java? Give example.
 - Write a program to overload constructor.
 - Write a java program to print the following pattern.

1

1 2

1 2 3

1 2 3 4

4+4+4+4=16

3.
 - Write a simple Java program to implement single inheritance.
 - Write a short note on different access specifier in Java.
 - What are similarities and differences between class and interfac? 6+6+4=16
4.
 - Make a list of some common exceptions in Java.

[Turn over]

- b) How we can hide a class within a package?
- c) Write the utility of 'lang' and 'util' package in Java.
- d) Write a java program with multiple threads.

$$4+4+4+4=16$$

5.
 - a) Discuss Thread life cycle.
 - b) How a thread is started its execution?
 - c) Define exception handling with suitable example.
6.
 - a) Discuss about the concept of multiple inheritance in Java.
 - b) Write a simple applet program in Java.
 - c) How local applet is differ from remote applet?
 - d) Write the use of <param> in Java.

$$6+4+6=16$$

$$4+6+4+2=16$$

7. Write short notes on any **four**:
- a) Object oriented language.
 - b) Thread priority in Java.
 - c) Java and C++
 - d) Security in Java.
 - e) Static Keyword.
 - f) Finalize () method.
