

**FACULTY OF INFORMATICS**  
**MCA (NON-CBCS) I Year II Semester (Backlog) Examination, April 2022**

**Subject: Principles of Object Oriented Programming using JAVA**

**Time: 3 Hours**

**Max. Marks: 80**

**(Missing data, if any, may be suitably assumed)**

**Note: Answer any five questions from the following.**

**All questions carry equal marks.**

- 1 (a) Explain Object Oriented Development in detail.  
(b) Illustrate Object Oriented Concepts with examples.
- 2 (a) Illustrate Classes and objects with examples.  
(b) Demonstrate types of inheritance.
- 3 (a) Define Thread. Explain Multithreading with example.  
(b) Demonstrate Print Writer Class with an example.
- 4 (a) Define Exception? Write a program on Exception Handling.  
(b) Demonstrate String in java with examples.
- 5 (a) Illustrate Collection Classes with an example.  
(b) Explain Random Access Interface with example.
- 6 (a) Discuss Maps and Arrays with examples.  
(b) Demonstrate Bit Set and Date with example.
- 7 (a) Illustrate Files in java with examples.  
(b) Explain java I/O classes and interfaces.
- 8 (a) Discuss Stream and Byte Classes.  
(b) Illustrate Serialization with an example program.
- 9 (a) Demonstrate event handling with example.  
(b) Explain Customizing Frame Windows.
- 10 (a) Discuss about GUI programming.  
(b) Illustrate the use of Layout Managers.

\*\*\*\*