

This question paper contains 4 printed pages.

Roll No. 

B.C.A.- 301

Java Prog.

301

B.C.A. Part-III EXAMINATION, 2025

(Faculty of Science)

(Three-Year Scheme of 10+2+3 Pattern)

Java Programming

Time Allowed : Three Hours

Maximum Marks: 100

समय : तीन घंटे

अधिकतम अंक : 100

Answers of all the questions (short answer as well as descriptive) are to be given in main answer-book only. Answer of short answer type questions must be given in sequential order. Similarly all the parts of question should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before start writing answers of the questions.

Question paper consists of three parts.

All three parts are compulsory.

Part-I : (Very short answer) consists of 10 questions of 2 marks each, Maximum limit for each question is up to 40 words.

Part-II : (Short answer) consists of 5 questions of 4 marks each, Maximum limit for each question is up to 80 words.

Part-III : (Long answer) consists of 5 questions of 12 marks each with one question from each unit with internal choice.



PART-I

[10×2=20]

1. Very short answer questions.

- (a) List the features of Java language.
- (b) What is JVM?
- (c) What are the access modifiers in Java?
- (d) Explain about final class.
- (e) What are interfaces in Java?
- (f) Explain about thread.
- (g) What are the types of exception in Java?
- (h) List any five AWT controls.
- (i) Explain about URL Class.
- (j) What is JDBC?

PART-II

[5×4=20]

2. Short answer questions:

- (a) Explain about the command line arguments.
- (b) What are the constructors in Java?
- (c) Explain about the Abstract Class.
- (d) What are the main functions of string handling?
- (e) Explain about Java Beans.

PART-III

3. Explain the following object oriented programming with the help of suitable examples-

- (a) Classes and objects
- (b) Encapsulation and Abstraction



Describe the following in detail.

- (a) Java Data Types & Types casting
- (b) Static and Dynamic polymorphism

4. Describe the different looping statements in Java. Explain enhanced for-each loop with the help of suitable example.

OR

Explain the difference between method overloading and method overriding with the help of suitable examples.

5. What is inheritance? What are different types of inheritance in Java explain with the help of suitable example.

OR

Explain about multithreading in Java with the help of a suitable example. Describe the thread priority and synchronization.

6. Explain the exception handling mechanism in Java with the help of a suitable example. Briefly describe use of throw in the exception handling.

OR

Explain the following in detail:

- (a) Event handling mechanism in Java
- (b) Layout and component managers

7. Explain the following in detail.

- (a) Sockets based connectivity
- (b) Servlets Life Cycle of Servlet

OR



Describe the following in detail.

- (a) TCP/IP sockets and Server sockets
- (b) Steps for the JDBC connectivity

