

(Please write your Exam Roll No.)

Exam Roll No.

END TERM EXAMINATION

FOURTH SEMESTER [BCA] JULY 2023

Subject: Java Programming

Paper Code: BCA-202

(BATCH 2021 ONWARDS)

Time: 3 Hours

Maximum Marks: 75

Note: Attempt five questions in all including Q.No. 1 which is compulsory.

- Q1 Answer the following *variable method call* (2.5x10=25)
- Discuss three usage of final keywords.
 - Mention various states of thread. Give suitable example.
 - How the constructor is overloaded in Java?
 - How multithreading is achieved in Java. Explain its advantages and disadvantages.
 - Why Java is called type safe language as compared to C++.
 - What are the roles of Java compiler and interpreter?
 - Explain Why the main function is declared as "Public static void main (String args [])"?
 - How does java byte code differ from other machine level codes?
 - What is the use of this, final and super keyword in Java.
 - Discuss process of synchronization of a thread with suitable example.
- Q2 a) What is constructor? Does Java provide default constructor? Explain your answer with suitable example. (8.5)
b) Explain in details the features of Java. (4)
- Q3 a) Explain the concept of abstract classes in Java with suitable example. How abstract classes differ from interface. (9.5)
b) What are interfaces? What are their benefits? Give the general form of a class that implements interfaces. (3)
- Q4 a) Explain different access modifiers available in Java. (6)
b) Differentiate between checked and unchecked exception. Write a program to illustrate user defined exception. (6.5)
- Q5 a) Explain the life cycle of threads. Also explain different ways of creating threads in java. (6.5)
b) Write a program to print the table of any no. inside the applet. (6)
- Q6 a) Discuss various Layout Managers available in AWT. (6.5)
b) Differentiate between Swing and AWT. (6)
- Q7 a) How is method overloading different from method overriding? Give suitable example.
b) Write **short notes** on the following: (5)
i) Adapter class (7.5)
ii) Applet and application program
iii) Check box and choice list

P.T.O.

[-2-]

- Q8 a) What is JDBC? Explain all JDBC drivers in detail. (7.5)
b) Write short notes on Java Servlet. (5)

- Q9 a) Explain the following term with respect to exception handling. (8.5)
i) Try *Exception also*
ii) Catch *Exception with*
iii) Finally
iv) Throw *Throw an exception*
b) Differentiate between JDBC and ODBC. (4)

Less Component
Heavyweight
Pluggable
Doesn't follow MVC