

B.C.A. (H) 4th Semester Examination, 2022
Subject: Computer Application
Course Title: JAVA Programming
Course Code: BCA 404

Time: 4 Hours

F.M: 80

Answer Question no. 1 and any four from rest

1. Answer any eight questions

8X2=16

- a) How do you define try block in Java?
 - b) Write two example of wrapper class.
 - c) Why is java known as platform neutral language?
 - d) What is Java Virtual Machine?
 - e) Why do we need import statement?
 - f) Why main () method of Java declared as static?
 - g) Why do we use JDBC?
 - h) What is abstract class?
 - i) Write the difference between local and remote applet in java?
 - j) What is Thread?
 - k) What is package? Give example.
 - l) Write the difference between public and protected.
2. a) Write different stages of life cycle of a thread.
b) Write a multithreaded program to print “BCA” and “2022 Batch” message at console at an interval of 5 seconds.
c) How do you pass parameters to an applet? Explain with an example. 5+6+5
3. a) Design a class to represent a bank account. Include following members
Data-members: Name of account holder, Account number, Account type, balance
Methods --
to deposit if account type = “SAVINGS” ; to withdraw amount after checking balance ;
to display name and balance of the account holder. Write a java code to test the above class.
b) Discuss different data types of Java.
c) In what ways does a “Switch” statement differ from an “If” statement.
d) Write a java program that reads value of “x” and evaluates the following function using conditional operator:
$$y = \begin{cases} 1 & \text{for } x > 0 \\ 0 & \text{for } x = 0 \\ -1 & \text{for } x < 0 \end{cases}$$
7+4+2+3
4. a) How do you define a “try-catch” block in java? Explain with an example.
b) “A try statement can have multiple catch blocks” – Justify with an example.
c) What is the use of the “finally” statement in java?
d) What are the common types of exceptions that might occur in java?
e) Define an exception called “No match exception” that is thrown when a string is not equal to “India”. Write a java code that uses this exception. 2+2+2+4+6

5. a) What is method overriding? Explain with an example.
b) Write a program to translate any two-digit number to its equivalent words i.e. 25 should be written as twenty five. 8+8
6. a) What is an inheritance? Discuss different forms of inheritance available in Java.
b) Write a program to implement method overloading through constructors. 8+8
7. Write short notes (any two): 2 x 8 = 16
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| a) Package | c) Life cycle of applet |
| b) Garbage Collection in java | d) Final methods |