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3 (Sem-2/CBCS) CSC HC 1

2023

COMPUTER SCIENCE

(Honours Core)

Paper : CSC-HC-2016

(Programming in Java)

Full Marks : 60

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions as directed :

1×7=7

(a) Java is a platform dependent programming language.

(True or False)

(b) Give the name of the method in string class, which is used to compare two strings, ignoring lowercase and uppercase differences.

(c) _____ is the process of reclaiming the runtime unused memory by destroying the unused objects.

(Fill in the blank)

Contd.

(d) Which class in Java is the super class of every other class ?

(e) Exception generated in try block is caught in _____ block.

(Fill in the blank)

(f) What is the full form of JVM ?

(g) Give the names of *two* keywords used in Java.

2. Answer the following questions : $2 \times 4 = 8$

(a) What is the use of 'super' keyword in Java ?

(b) Give the syntax to declare a two-dimensional array in Java.

(c) Give the names of *four* access modifiers in Java.

(d) What is a package in Java ? Give the names of *two* standard Java packages.

3. Answer **any three** of the following questions : $5 \times 3 = 15$

(a) Write a Java program to reverse the digits of a number.

(b) When do you need String Buffer class instead of string class ? Give a suitable example to support your answer.

(c) Explain the features of Java programming language.

(d) What are the different types of inheritance supported in Java ? Give a suitable Java program to demonstrate *any one* type of inheritance.

(e) Give the difference between Java and C++ programming language.

4. (a) What is type conversion ? What are the different types of type conversion ? Briefly explain *any one* type conversion mechanism.

(b) Write a Java program to check whether a number is prime or not.

$5+5=10$

OR

5. What are the *two* ways to implement thread in Java ? Give suitable examples to illustrate both the techniques. 10

6. (a) Discuss the basic principles of Object-Oriented Programming.
- (b) Explain the process of autoboxing and unboxing.
- 5+5=10

OR

7. Write a Java program to create a class 'Student' with string variable 'name' and integer variable 'rollno'. Create a member function display() to print the name and rollno of a student. Then, create an object of that class, assigning the value of rollno as 3 and that of name as 'Badal'. Also, call the display () function to print the details.
- 10

8. (a) Explain JDBC.
- (b) What are the differences between Swing and AWT?
- 5+5=10

OR

9. What do you understand by constructor overloading? Give suitable example of constructor overloading.
- 10
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