Course Code: DCAP501

Course Title: Modern Programming Tools & Techniques-I

Date of Exam: 15 March   **Session 09:30-12:30**
Time Allowed: 3 hours   **Max. Marks: 80**

1. *This paper contains 10 questions divided in two parts on 1 page.*
2. **Part A is compulsory.**
3. **In Part B (Questions 2 to 10), attempt any 6 questions out of 9. Attempt all parts of the questions chosen.**
4. *The marks assigned to each question are shown at the end of each question in square brackets.*
5. *Answer all questions in serial order.*
6. The student is required to attempt the question paper in **English medium only.**

Part-A

Q1: (a) Define the term Variable?

(b) What is an Array?

(c) What is the difference between String and StringBuffer Class?

(d) What is a Constructor?

(e) Define the term Interface.

(f) What is a Package?

(g) What is the difference between Byte Stream and Character Stream?

(h) What do you mean by synchronization?

(i) What is an Exception?

(j) What does AWT stands for?   [2*10=20]

Part-B

Q2: Write a short note on different Data Types in Java.

Q3: What are the different Decision Making statements in Java? Explain each with proper syntax and flow chart diagram.

Q4: What is a Constructor and what are its different types?

Q5: What is Multithreading and what are the different ways of creating threads in Java?

Q6: Write a short note on inheritance in Java.

Q7: What are Packages in Java? Write down the steps for creating custom packages.

Q8: What is an Interface and how can it be used to achieve multiple inheritance? Explain with example.

Q9: Write a program to find the area of rectangle using default and parameterized constructor.

Q10: Write a program to print first 20 Natural Numbers, each after a period of 1 sec.   [6*10=60]