(handwritten notes at top: Ready → Active → Running → Terminate, Waiting)

IIIT Vadodara

B.Tech. (CSE): Semester VII

Introduction to Distributed & Parallel Computing (CS-401)

Mid Semester Exam

Max-Marks – 30   **Time: 2 Hours**

Instructions – All questions are compulsory and carry equal marks. Answers must be specifically written.

1. A. Write down the differences between client-server, three-tier and peer-to-peer models with examples.

   B. Write down various applications of distributed computing.

2. A. How communication takes place in Distributed Systems. Describe the procedure.

   B. What do you mean by layered protocols? Briefly explain.

(handwritten margin note: SMDP)

3. A. What is Flynn's Classical Taxonomy? Explain.

   B. Write down the difference between TCP and UDP. Describe the process that follows to establish client-server communication.

(handwritten margin notes: Thread, Shared Memory)

4. A. Describe various parallel computer memory architectures.

   B. What are the differences between CPU and GPU? Why is a GPU suitable for image processing?

5. A. What is multithreading? Describe the life cycle of the Java Thread.

   B. What is RMI? How can we create a remote interface? Write code.

6. A. Describe the working of RPC (Remote Procedure Call).

   B. What are the uses of IaaS, PaaS and SaaS perspectives in cloud computing?