KLS Gogte Institute of Technology, Belagavi

Program: B.E. Academic Year: 2023-24 (EVEN SEM)

Department: CSE Semester: VI Max. Marks: 25 marks **IA Test – II**

**Course Title: Unix System & Network Programming Code: 21CS64**

**Duration: 1 Hr. Date: 11/06/2024**

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| **Q.No** | **PART A (Compulsory question)** | **[L ]** | **[CO]** | **[PO]** | **[M]** |
| **1.** | Explain the different UNIX file types with an example. | **2** | **2** | **1** | **5** |
| **PART B (Answer any 1 questions)** | | | | | |
| **2.** | Develop a C / C++ program to emulate the unix ln command. (Hard link & Soft link) | **3** | **2** | **3** | **10** |
| **3.** | Explain the 'recvfrom()' & 'sendto()' functions with their syntax for UDP Client and develop a C / C++ code snippet to implement a 'dg\_cli' function for the same. | **2,3** | **4** | **3** | **10** |
| **PART C (Answer any 1 question)** | | | | | |
| **4.** | Assume the last 100 bytes as a region. Develop a C/C++ program to check whether the region is locked or not. If the region is locked, print pid of the process which has locked. If the region is not locked, lock the region with an exclusive lock, read the last 50 bytes and unlock the region. | **4** | **2** | **3** | **10** |
| **5.** | Analyze the concept of IPv6 Client, IPv4 Server and consider that an IPv6 TCP client is running on a dual-stack first. Summarize all the steps for Processing of client requests, depending on address type and socket with a neat diagram. | **4** | **4** | **4** | **10** |

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| **Sign with Date** |  |  |  |  |
| **Faculty Members** | **Mod. Coordinator** | **PAC** | **IQAC** | **HOD** |
| **Remarks (if any)** |  | | | |