Program: BE

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| Date | June 2025 | Maximum Marks | 50 |
| Course Code | **CS362AI** | Duration | 90 min |
| 6th Sem | VI Semester | CIE-II - Scheme | |
| **Network Programming and Security** | | | |

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|  | **QUIZ** | **M** | **L** | **CO** |
| 1 | 1. 443 2. Error | 2 | L3 | CO1 |
| 2 | Means we are not interested in kernel filling the client information | 1 | L3 | CO1 |
| 3 | Resolv.conf | 1 | L3 | CO2 |
| 4 | 1. Getservbyname 2. Getaddrinfo 3. Gethostbyname 4. Getsockopt | 2 | L3 | CO2 |
| 5 | Convert error code to string  const char \*gai\_strerror (int *error*); | 2 | L3 | CO1 |
| 6 | Any two   1. Block size 2. Keysize 3. Number of rounds 4. Round function | 2 | L3 | CO4 |
| **Sl. No.** | **Test Questions** | **M** | **L** | **CO** |
| 1 | Figure + Explanation = 2+3  Resource records – 5 marks  Understanding Different Types of Record in DNS Server | **10** | L2 | CO1 |
| 2a | int getaddrinfo (const char \**hostname*, const char \**service*, const struct  addrinfo \**hints*, struct addrinfo \*\**result*) ;  hints.family = AF\_INET  hints.protocol = SOCK\_STREAM 4+2 | **06** | L3 | CO3 |
| 2b | Port =53  Protocol – UDP | **04** | L3 | CO2 |
| 3a | Socket option Getsockopt ou setsockopt fcntl ioctl. - ppt download | **05** | L3 | CO2 |
| 3b | Cryptography Basics. The objective of Cryptography? | by Dilanka  Muthukumarana | Medium | **05** | L3 | CO4 |
| 4 | Client: socket() -> scanf(), sendto(), recvfrom()  Server: socket() ->bind() -> recvfrom()-> open()-> sendto() 5+5 | **10** | L4 | CO2 |
| 5 | Encryption – 5marks, Decryption – 5 marks | **10** | L4 | CO5 |

**Course Outcomes**

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| CO1 | Explore the variety of network programming concepts and protocols. |
| CO2 | Analyse the interoperability of networking protocols and its usage. |
| CO3 | Design the client/server communication on Unix platforms. |
| CO4 | Investigate & Design the cryptographic algorithms to ensure secure transfer of secret keys and encryption/decryption of messages. |
| CO5 | Demonstrate Network Programming and Cryptographic algorithms to solve real-world problems. |

**Blooms’ taxonomy**

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| L1 | L2 | L3 | L4 | L5 | L6 | CO1 | CO2 | CO3 | CO4 | CO5 | CO6 |
|  | 10 | 30 | 20 | - | - | 15 | 22 | 06 | 07 | 10 | - |