Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **17CS2060** | **Duration :** | **3hrs** |
| **Sub. Name :** | **TCP/IP** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | With neat sketch describe the functionalities of OSI model. | CO1 | 20 |
| **(OR)** | | | | |
| 2. | a. | A private network spans around two building of three floor each. The network is also connected to public internet. Both private and public IP system has been deployed.  i. Create a logical and physical topology for the above specifications.  ii. Discuss about the requirement in terms of each layers of TCP/IP. | CO2 | 20 |
|  |  |  |  |  |
| 3. | a. | Give some advantages and disadvantages of the connection-oriented service. | CO1 | 5 |
|  | b. | Compare and contrast the delays in connectionless and connection-oriented services. Which service creates less delay if the message is large? Which service creates less delay if the message is small? | CO2 | 15 |
| **(OR)** | | | | |
| 4. | a. | Draw and explain the IP header structure. | CO3 | 10 |
|  | b. | Compare and contrast IPV4 and IPV6. | CO4 | 10 |
|  |  |  |  |  |
| 5. | a. | Refer to the exhibit and answer the following questions  https://www.cisco.com/c/dam/en/us/td/i/100001-200000/130001-140000/130001-131000/130029.ps/_jcr_content/renditions/130029.jpg  i. List the inside local, global and outside local and global address for the private networks. Write the merits and demerits of this network.  ii. Tabulate the NAT table for communication in the above network. | CO1 | 20 |
| **(OR)** | | | | |
| 6. | a. | Explain the concept of mobile IP using the following addressing scheme.  Mobile host home address: 130.45.6.7/16  Mobile host care-of address: 14.56.8.9/8  Remote host address: 200.4.7.14/24  Home agent address: 130.45.10.20/16  Foreign agent address: 14.67.34.6/8  Discuss the problem of triangular routing in the above conversation. | CO4 | 20 |
|  |  |  |  |  |
| 7. |  | Explain the process of Flow control in TCP with suitable example | CO5 | 20 |
| **(OR)** | | | | |
| 8. | a. | Justify why UDP is used for multimedia applications | CO3 | 5 |
|  | b. | Describe the connection establishment and termination of TCP. | CO3 | 15 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss the method by which a host acquire its IP address in a network. | CO5 | 10 |
|  | b. | Recall and justify the importance of cookies and web caching in HTTP. | CO6 | 10 |