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

****

**End Semester Examination – Nov/Dec– 2017**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **17CS3023** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ROUTING AND SWITCHING TECHNIQUES** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Explain IPv4 header format with suitable diagram. | CO1 | 10 |
| b. | Discuss the Neighbor discovery protocol used by IPv6. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Demonstrate how administrator configures static routing using IPv6 for the below given topology. | CO1 | 10 |
| b. | Discuss the comman issues and characteristics of dynamic routing protocols. | CO4 | 10 |
|  |  |  |  |  |
| 3. |  | Describe the operation carried out by OSPF to compute the best path and explain the link state database with appropriate example. | CO4 | 20 |
| (OR) | | | | |
| 4. |  | Demonstarte how to configure RIPv2 in all the routers and explain the message format of RIPv2. | CO4 | 20 |
|  |  |  |  |  |
| 5. | a. | Explain the principles of redistribution and demonstrate how to configure redistribution of EIGRP routes into OSPF with example. | CO6 | 10 |
|  | b. | Demonstrate the configuration of static default route in a hub and spoke network. | CO6 | 10 |
| (OR) | | | | |
| 6. |  | Explain the operation of STP and RSTP for active loop elimination in bridged network . | CO4 | 20 |
|  |  |  |  |  |
| 7. | a. | Differentiate half duplex and full duplex mode of operation in LAN. | CO5 | 10 |
|  | b. | Discuss the generic architectural framework of the Ethernet MAC control with diagram. | CO5 | 10 |
| (OR) | | | | |
| 8. |  | Describe the benefits, issues and application of link aggregation in Ethernet LANs. | CO4 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Elaborate the technical and operational aspects of VLANs and its applications. | CO3 | 10 |
|  | b. | Describe the various security concerns at the data link layer. | CO2 | 10 |

ALL THE BEST