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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – April/May– 2017**

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| **Code :** | **14CS3029** | **Duration :** | **3hrs** |
| **Sub. Name :** | **NETWORK MANAGEMENT** | **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. | Design an Ethernet LAN using a 10/100 Mbps switched Ethernet hub to handle the following specifications:  Number of clients = 16 operating at 10 Mbps  Number of server = 1  50% of the traffic is directed to the server  Draw the configuration and indicate the transmission modes on the ports. | CO1 | 10 |
| b. | Explain the reason why the performance of an Ethernet LAN decreases with increase in the number of workstation on the LAN? | CO1 | 10 |
| (OR) | | | | |
| 2. |  | An SNMP Manager sends a request message to an SNMP agent requesting sysUpTime at 8.00 AM. |  |  |
| a. | Design an organizational model depicting the above topology. | CO2 | 10 |
| b. | Build a get-request PDU from manager to agent in SNMPV1 | CO2 | 5 |
| c. | Respond to the above request with get-response PDU with the reply no such name | CO2 | 5 |
|  |  |  |  |  |
| 3. | a. | Differentiate SNMPv1 and SNMPV2. | CO2 | 10 |
|  | b. | How do SNMPv2 enforce compatability with SNMPv3? | CO2 | 10 |
| (OR) | | | | |
| 4. |  | Eloborate the five types of applications in SNMPv3. | CO2 | 20 |
|  |  |  |  |  |
| 5. | a. | Sketch the message format of SNMPV3. | CO2 | 7 |
|  | b. | Outline the privacy and authentication service for an outgoing Message in SNMPV3. | CO2 | 13 |
| (OR) | | | | |
| 6. | a. | Assume a LAN network of 10,000 nodes. The network is subdivided into 10 sebnets. Design a heartbeat monitoring system, using RMONs that indicate failures to the NMS within a miunte of a failure. | CO3 | 15 |
|  | b. | What are the issues faced in ATM Remote monitoring? | CO3 | 5 |
|  |  |  |  |  |
| 7. | a. | List various status monitoring tools in Network Management. | CO3 | 5 |
|  | b. | What is the functionality of dig command. | CO3 | 5 |
|  | c. | Explain how ping works in network management. | CO3 | 10 |
| (OR) | | | | |
| 8. |  | Explain in detail various network Statistics Measurement Systems. | CO3 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Analyze various requirement to design NMS Server for a telecommunication system. | CO3 | 10 |
|  | b. | Examine the architecture and major design aspects of the NMS server. | CO3 | 10 |

ALL THE BEST