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 – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14CS2007** | **Duration :** | **3hrs** |
| **Sub. Name :** | **COMPUTER NETWORKS** | **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. | What are the seven layers of OSI model? | CO1 | (5) |
|  | b. | Explain the various delays incurred in computer networks. | CO1 | (15) |
|  |  | (OR) |  |  |
| 2. | a. | What are the various physical media used to connect the networks | CO2 | (10) |
|  | b. | Explain the functionalities of layers in computer networks. | CO2 | (10) |
| 3 |  | Explain the working of Simple Mail Transfer Protocol. | CO3 | (20) |
|  |  | (OR) |  |  |
| 4 | a. | What is the need for DNS? | CO3 | (5) |
|  | b. | What are the services provided by DNS? | CO3 | (5) |
|  | c. | Explain how domain name system converts URL into IP address. | CO3 | (10) |
| 5 | a. | Why do certain application prefer UDP? | CO2 | (5) |
|  | b. | With neat sketch explain the TCP header Structure. | CO2 | (15) |
|  |  | (OR) |  |  |
| 6 |  | What are the various congestion control mechanism used in TCP? | CO2 | (20) |
| 7. | a. | Find the error, if any, in the following IPv4 addresses:  a. 111.56.045.78  b. 221.34.7.8.20  c. 75.45.301.14  d. 11100010.23.14.67 | CO2 | (4) |
|  | b. | Find the class of each address:  a. 227.12.14.87  b. 193.14.56.22 | CO2 | (4) |
|  | c. | Explain the need for TTL in IP header. | CO2 | (4) |
|  | d. | List the private IP range in class A,B and C. Give reasons why do we need the same. | CO2 | (8) |
|  |  | (OR) |  |  |
| 8. | a. | State any two difference between IPV4 and IPV6? | CO2 | (4) |
|  | b. | Change the following IPv4 addresses from binary notation to dotted-decimal notation.  i) 10000001 00001011 00001011 11101111  ii) 11000001 10000011 00011011 11111111 | CO2 | (4) |
|  | c. | i. Subnet the following network into four subnets 223.1.17.0/24. Provide eight network addresses (of the form a.b.c.d/x) that satisfy the above constraints. | CO2 | (12) |
|  |  | **Compulsory** |  |  |
| 9 |  | With neat sketch explain the working of CSMA CD and CSMA CA | CO3 | (20) |

ALL THE BEST