DON BOSCO INSTITUTE OF TECHNOLOGY

Department of Information Science and Engineering

**Subject: COMPUTER NETWORKS AND SECURITY**

**Subject Code: 18CS52**

**Semester : 5 Section: A,B Academic Year: Aug – Dec 2020**

**Assignment 1**

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| **Module 1**  1)List and explain the difference between client server and peer to peer architectures (10M)  2)Mention the explain the different transport services available to Applications (8M)  3)With a neat diagram explain the working principles of HTTP Request Response behaviour (8M)  4)With an example explain the difference between HTTP persistent and non-persistent connections (10M)  5)With a neat pictorial representation explain general format of HTTP request response Message format. List five status codes of HTTP and explain the purpose. (10M)  6)What is cookie? Explain the working procedure with a neat diagram (10M)  7)Explain web caching with a neat diagram (8M) |
| 8)What is FTP? Explain the working principle of protocol. (10M)  9)List and explain the FTP Commands and Replies (8M)  10)Explain SMTP protocol with a neat diagram. List the difference between SMTP and HTTP.(10M)  11)List and explain the different mail access protocols using a neat sketch. (10M)  12)What is DNS? List its various servicers. Explain the following terms (a)host aliasing, (b)mail server aliasing,(c) load distribution.  13)Explain the working principle of DNS server with a hierarchy of DNS Server. (8M)  14)With a neat diagram explain the interaction of the various DNS servers with two procedures (10M) |
| 15)Explain in detail the DNS records and messages using different “type” values. (8M)  16)With a neat diagram explain the structure of DNS Message format (8M)  17)Explain the Bit-Torrent and DHT with a neat diagram (10M)  18)Explain socket programming using UDP. (10M)  19)Explain socket programming using TCP. (10M)  **Module 2**  20)Explain the working principles of multiplexing and de-multiplexing in transport layer (10M)  21)Explain the working principle of connectionless transport UDP using a UDP segment structure (8M) |
| 22)Explain the reliable data transfer its service model and service implementation with a neat diagram (10M)  23)Explain the working procedure with a respective FSMs for rdt1.0 and rdt2.0 (10M)  24)Explain the working principles of rdt2.1 using a neat sketch (8M)  25)Explain the working principles of rdt2.2 with a neat sketch (8M)  26)Explain the rdt3.0 with a neat diagram for sender and receiver (10M)  27)Explain Go-Back-N protocol using a pictorial representation (10M)  28)With neat diagram explain the working principles of Selective-Repeat Protocol (10) |

Note: Batch 1: Question numbers: 1,5,9,13,17,21,25

Batch 2: Question numbers: 2,6,10,14,18,22,26

Batch 3: Question numbers: 3,7,11,15,19,23,27

Batch 4: Question numbers: 4,8,12,16,20,24,28

Faculty: HoD:

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