**DON BOSCO INSTITUTE OF TECHNOLOGY, BANGALORE-560074**

**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING**

Subject: COMPUTER NETWORKS AND SECURITY

Subject Code: 18CS52

Semester: V

Section: A &B

Academic Year: Aug – Dec 2020

**Assignment 2**

**Guidelines:**

1. Assignment has been given for four batches with 5 questions each separately
2. Batch contains the following Rollnos as per the order of Nominal Roll attached herewith.
   1. Batch -1: 1DB16IS008 to 1DB18IS060 – 12 Members
   2. Batch -2: 1DB18IS061 to 1DB18IS075 – 12 Members
   3. Batch -3: 1DB18IS076 to 1DB18IS088 – 12 Members
   4. Batch -4: 1DB18IS089 to 1DB14IS022 – 13 Members
3. Each batch of students should write for their assigned questions. If the questions are used from other batches then the assignment will not be considered.

**Batch-1**

1. How reliability is ensured with Selective Repeat in UDP. Explain with suitable diagram
2. Justify: TCP is connected oriented. Explain three way handshaking in connection management with suitable Diagram.
3. Write short notes on network assisted congestion control.
4. Why Distance-Vector Routing Protocol is important? Justify with algorithm, example and applications.
5. Describe in detail on various classifications of Broadcast and Multicast Routing Protocols

**Batch-2**

1. Draw the structure of TCP Segment and signify the fields towards reliable transfer.
2. Justify: Connection termination has also to be proper for Reliable Data Transfer. Explain 4 way handshaking of connection termination in TCP
3. Draw the architecture of a Router. Differentiate Forwarding and Routing. How they are carried out in Data and Control planes.
4. Define Autonomous System. Differentiate Intra and Inter AS routing protocols?
5. Write short notes on switching methods in router.

**Batch-3**

1. Justify: Reliable data transfer is ensured in TCP. Enumerate the factors and elicit the facts.
2. Define RTT. How efficiency is calculated and estimated in terms of RTT?
3. What is the significance of Link-State Routing Protocol? Explain with its associated algorithm and suitable example.
4. Write short notes on RIP and OSPF Protocols.
5. Define Hierarchical Routing. Explain Briefly.

**Batch-4**

1. Define congestion control and its mechanisms. Discuss the causes and the costs of it on various scenarios.
2. List out various approaches of congestion control. Explain in detail.
3. Differentiate IPV4 and IPV6. How mapping is carried out in tunnelling?
4. Define the working principle of BGP. Illustrate its intra and intercommunication in AS.
5. Compare and Contrast Link State and Distance Vector Routing protocols.

**Faculty:** Dr. M. Selvam & Ms. C. Haripriya

**NOMINAL ROLL – V SEMESTER B SECTION**

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| --- | --- | --- |
| **S.No** | **USN** | **NAME** |
| 1 | 1DB16IS008 | AYUSH PANDEY |
| 2 | 1DB17IS013 | GOLU KUMAR |
| 3 | 1DB17IS034 | SHAKTHI VINAYAKA E |
| 4 | 1DB17IS038 | SHUBANGI L |
| 5 | 1DB17IS045 | YASHASWI. S |
| 6 | 1DB18IS054 | NITHIN RC |
| 7 | 1DB18IS055 | PAVAN K |
| 8 | 1DB18IS056 | PAVAN RAJ B |
| 9 | 1DB18IS057 | PAVITHRA S |
| 10 | 1DB18IS058 | POOJITH S |
| 11 | 1DB18IS059 | PRARTHANA K |
| 12 | 1DB18IS060 | PRIYADHARSHINI K |
| 13 | 1DB18IS061 | RAASHI SINGH |
| 14 | 1DB18IS062 | RACHANA D |
| 15 | 1DB18IS064 | RESHMA M |
| 16 | 1DB18IS065 | SAHANA R |
| 17 | 1DB18IS066 | SAKSHI SINGH |
| 18 | 1DB18IS067 | SANJANA M |
| 19 | 1DB18IS069 | SANMATHI R |
| 20 | 1DB18IS071 | SATHWIK HEBBAR K |
| 21 | 1DB18IS072 | SHREAS S |
| 22 | 1DB18IS073 | SHREYAS KS |
| 23 | 1DB18IS074 | SHREYAS S |
| 24 | 1DB18IS075 | SHRINIDHI M |
| 25 | 1DB18IS076 | SNEHA U |
| 26 | 1DB18IS077 | SNEHA V WALIKAR |
| 27 | 1DB18IS079 | SSOUMYA K |
| 28 | 1DB18IS078 | SONY SK |
| 29 | 1DB18IS080 | SRILAKSHMI R |
| 30 | 1DB18IS081 | SUBHASH.H |
| 31 | 1DB18IS082 | SUMA K R |
| 32 | 1DB18IS083 | SUMANTH K |
| 33 | 1DB18IS084 | SUMANTH GOWDA DM |
| 34 | 1DB18IS085 | SUNETHRA RANGANATH |
| 35 | 1DB18IS087 | SUSHMITHA NAYAK |
| 36 | 1DB18IS088 | T KANISHKAR |
| 37 | 1DB18IS089 | T N SHESHU |
| 38 | 1DB18IS090 | TEJESHWAR R |
| 39 | 1DB18IS092 | VALLAMKONDA SAI ROHIT |
| 40 | 1DB18IS093 | VARSHITA S |
| 41 | 1DB18IS094 | VARSHITHA N |
| 42 | 1DB18IS095 | VASU DEV SIRVI |
| 43 | 1DB18IS096 | VIKAS KUMAR P |
| 44 | 1DB18IS097 | VISHWAS D RAJ |
| 45 | 1DB18IS098 | VIVEK V PAI |
| 46 | 1DB18IS099 | YASHWANTH B H |
| 47 | 1DB18IS100 | YASMIN FATHIMA.A |
| 49 | 1DB15IS012 | HEPSIBHA SUSANNA Y |
| 50 | 1DB14IS022 | LOKESH CHOUDHARY |

**Faculty:** Dr. M.Selvam