**United College of Engineering and Research, Prayagraj**

**Department of Computer Science and Engineering**

**Computer Network (KCS-603)**

**Assignment-2**

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| **Q. No.** | **Question** | **CO** | **Bloom’s level** |
|  | What is Ethernet LAN? | CO2 | L1 |
|  | What is bit Stuffing? | CO2 | L1 |
|  | Calculate the throughput for a pure ALOHA network if the offered traffic is 0.75. | CO2 | L3 |
|  | If bandwidth of a channel is 10Mbps, round trip time is 100 micro second, frame size is 100 bits then calculate link utilization of a channel? | CO2 | L3 |
|  | Write Nyquist theorem for noiseless channel. We need to send 280 kbps over a noiseless channel with a bandwidth of 20 kHz. How many signal levels do we need? | CO2 | L3 |
|  | Explain the performance of ALOHA and Slotted ALOHA with mathematical expressions and graph. | CO2 | L2 |
|  | Explain CRC. Generate the CRC code for the data of 1010011110. The divisor is 1011. And perform CRC checking of generated CRC code? | CO2 | L4 |
|  | An ALOHA network uses 9.2 kbps channel for sending message packets of 100 bits long size. Calculate the maximum throughput for pure ALOHA network. | CO2 | L3 |
|  | What is the total delay (latency) for a frame size of 10 million bits that is being set up on link with 15 routers, each having queuing time of 2μs and a processing time of 1μs? The length of link is 3000km The speed of light inside the link is 2x108 m/sec. The link has bandwidth of 6 Mbps. | CO2 | L3 |
|  | Explain Go Back NARQ and Selective Repeat ARQ with example m=3 bits. | CO2 | L2 |