Online Assignment - 22.02.2021

Warnings and Instructions:

1. Don't share your assignment **reports with your classmates**. If your classmates copy your answers, it will become unavoidable to **reduce your marks drastically** in case of finding out any kind of resemblance between answers.
2. Your marks will be reduced if you **copy and paste directly** from any web contents. As well as **copy and paste directly** is not allowed.
3. You must type the answers in the given text area.

(a) TCP defines how to establish and maintain a network conversation via which application programs can exchange data.

(i) Specify the overall purpose of the following tasks in TCP.

I. Flow control

II. Congestion Control

[2 x 2 Marks]

(ii) Specify the name of the window and who specify the window size in the above tasks.

[2 x 2 Marks]

(b) Briefly explain the congestion window size changes in the following phases of the TCP congestion control.

(i) Slow Start phase

(ii) Congesion Avoidance phase

[2 x 3 Marks]

(c) A sample congestion window size versus transmission round graph of a TCP flow is shown below in Figure Q1.

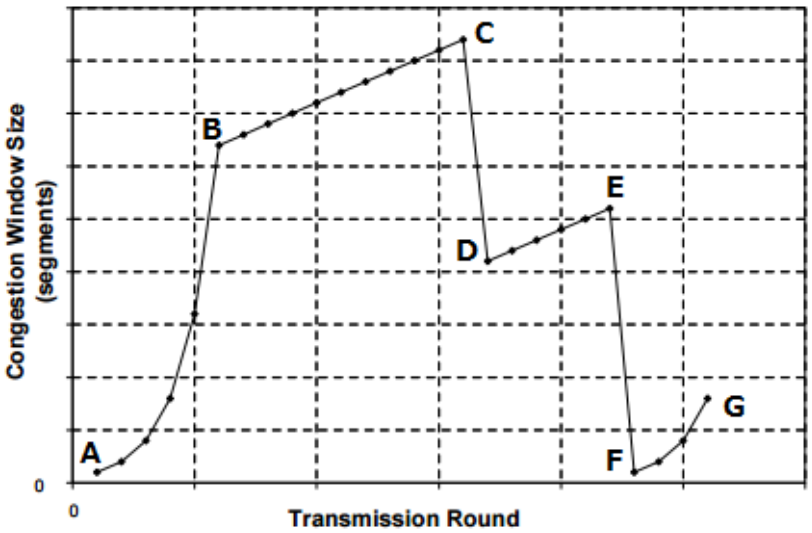

Figure Q1 : Sample Congestion Window during a TCP flow

(i). Specify the following items using the letters A,B,C,D,E,F and G indicated in the graph:

I. the slow-start phases in the graph.
II. the congestion avoidance phases in the graph.
III. point where the segment loss was detected by the coarse timeout
IV. point where the segment loss was detected by a triple duplicate ACKs

[8 Marks]

(ii). Briefly explain how the new slow-start threshold value is calculated in the EF region.

[3 Marks]