ITS323 − Quiz 6

Name: ———————————— ID: —————————— Marks: ———— (4)

Question 1   [4 marks]

Consider the internet below where source A is sending 12KB of data to destination B. The 4 subnets are numbered. The maximum packet size that is allowed by each subnet link layer is: 2000B (subnet 1); 4000B (subnet 2); 4000B (subnet 3); 1000B (subnet 4). There are 3 possible fragmentation schemes: fragmentation and re-assembly at any node; fragmentation only at the source, re-assembly only at the destination; or fragmentation at any node, re-assembly only at the destination. Assume the 1st scheme is being used. You can ignore the size of headers in the following questions.
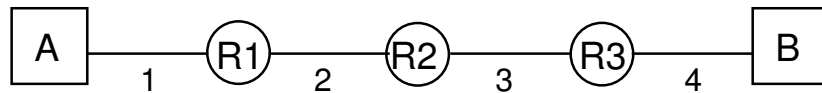
(a) What is the maximum size of each packet sent across the 2nd subnet? [2 marks]

(b) What is an advantage of this fragmentation/re-assembly scheme (compared to the 2nd scheme)? [1 mark]

(c) What is a disadvantage? [1 mark]