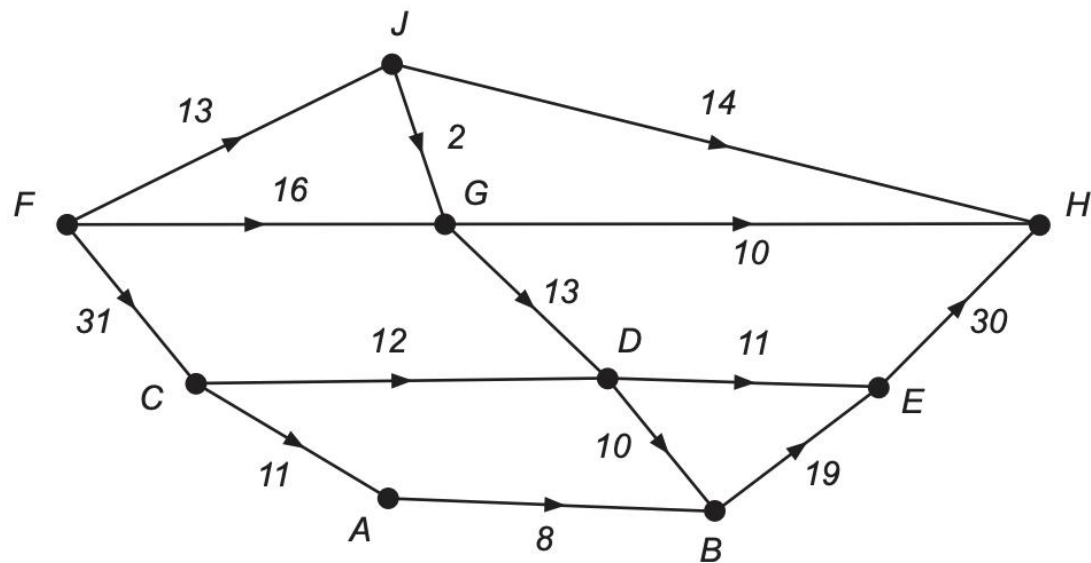


Question 13**(8 marks)**

The traffic flow (in hundreds of cars per hour) through a road network (F to H) is shown below.



- (a) By listing the different paths and their flow rate, determine the maximum flow through the network. (4 marks)

- (b) Verify the maximum flow obtained in part (a) by showing the minimum cut on the given network. (1 mark)
- (c) (i) If **one** road is to be widened to allow for more traffic, which road should be chosen to increase the maximum flow the most? (1 mark)
- (ii) How much more traffic should this road allow to flow and what would be the new maximum flow for the network? (2 marks)