Part 1

Q1

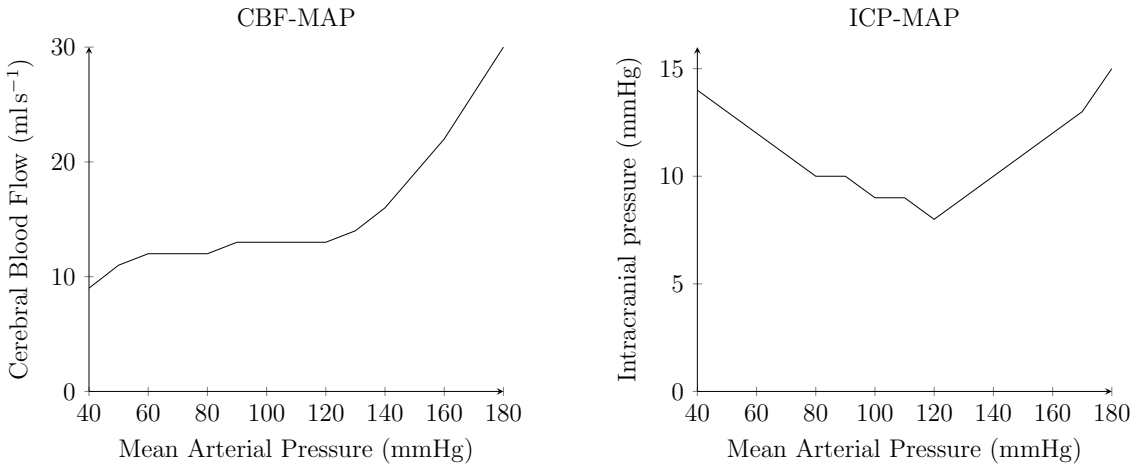

Figure 1: Normal cerebral blood flow and intracranial pressure

Q2b

By changing kGaut to zero, we get the following graphs.

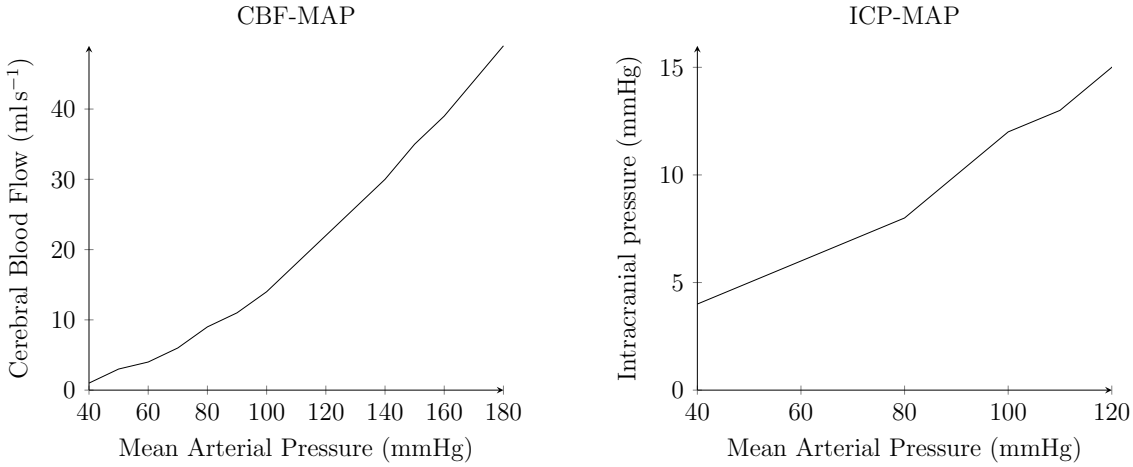

Figure 2: Cerebral blood flow and intracranial pressure without autoregulation

Part 2

Q3B

Modelling a TBI as disturbing autoregulation to 50% of its normal value, that is kGaut = 0.5; and an increase in CBF outflow (kRo) to 3.

Figure 3: Brain injury – kRo: 3. kGaut: 0.5

Q3C

Modelling a TBI as disturbing autoregulation to 50% of its normal value, that is kGaut = 0.5; and an increase in CBF outflow (kRo) to 3.

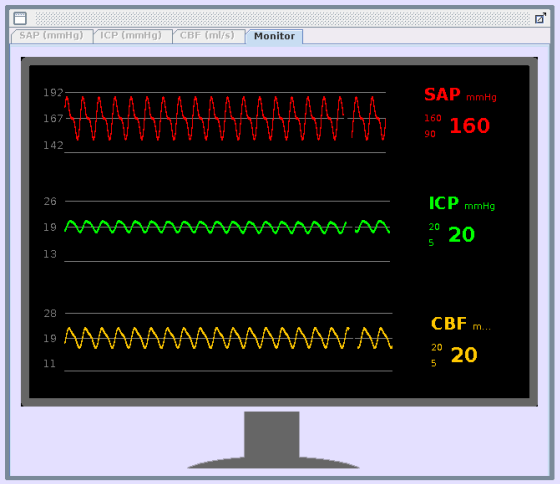

Figure 4: Hemmorhage on normal brain

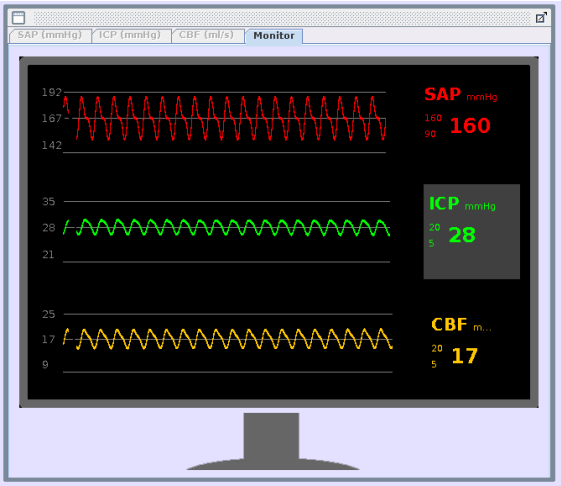

Figure 5: 10ml hemorrhage. Brain injury – kRo: 3. kGaut: 0.5