A personal area network (PAN)  works in IEEE 802.15.4 beacon-enabled mode with CFP only, and with a nominal data rate of 250 [kb/s]. Motes in the network have uplink only traffic towards the PAN with the following distribution: P(r=0 [bit/s])=0.1,  P(r=10 [kb/s])=0.3, P(r=20 [kb/s])=0.6. Motes use packets of b = 128 bytes for communication, and each packet fits exactly one slot in the CFP.

1. **What is the beacon interval (BI) in ms?**

**102.4 ms**

1. **What is the slot time (Ts) in ms?**

**4.096 ms**

1. **Assuming the maximum duty cycle allowed is 30%, what is the active part of the superframe (Tactive) in ms?**

**30.72 ms**

1. **How many active slots are there in the BI?**

**(6+1) slots**

1. **How many inactive slots are there in the BI?**

**(25-7=18) slots**

1. **How many motes can join the network?**

**3 motes**