Problem 1: Problem 12.15 ; Razavi’s book
Problem 2: Problem 12.16 ; Razavi’s book
Problem 3: Consider the following circuit:

(3.1) Describe the circuit operation in details.
(3.2) Explain why can this circuit be utilized in high-speed applications?
(3.3) Can this circuit eliminate the input-dependent charge injection?
(3.4) Use the following 0.35µm MOS spice parameters that has been provided by MOSIS, and answer the following question:

[Link to MOSIS parameters]

(3.5) Using either HSPICE or Cadence, obtain the output voltage in response to a sinusoidal voltage at a period of 50nsec. The clock input is running at 200MHz. You have the choice of using any CMOS operational transconductance amplifier (OTA) that would be capable of generating a stable output at the specified clock frequency.