Assignment 4

The due date for submitting this assignment has passed.

As per our record you have not submitted this assignment.

1) The variation of the threshold voltage with the applied back to source voltage is typically observed by plotting the __________ as a function of the __________ voltage.
   - Drain current
   - Source of the drain current
   - Square of the drain current
   - Square root of the drain current
   - Natural logarithm of the drain current

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Square root of the drain current

2) An NMOS transistor has $V_{th} = 0.8 \text{ V}$ and $V_{gs} = 5 \text{ V}$. Find $V_{ds}$ when $V_{gs} = 5 \text{ V}$

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - 4.15 V
   - 1.29 V
   - 2.85 V
   - 8.5 V
   - 9.45 V

3) The threshold voltage is
   - Increases on increasing temperature
   - May increase or decrease on increasing temperature depending upon other factors
   - Temperature independent
   - Decreases on increasing temperature

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Decreases on increasing temperature

4) Comparator, which can often be estimated more accurately using SPICE simulator is
   - Passive components
   - Non passive components
   - Resistive components
   - Active components

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Active components

5) CMOS inverter has _______ region of operation
   - Three
   - Four
   - Five
   - Nine

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Five

6) In the region where inverter exhibits gain, the two transitions are in _______ region
   - Linear
   - Cut-off
   - Non-saturation
   - Saturation

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Saturation

7) Increasing gain——— decrease propagation delay
   - Increases
   - Decreases
   - Increase exponentially
   - Decrease exponentially

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Decrease exponentially

8) Which of the following really constitutes the output node capacitance
   - Gate electrode capacitance
   - Source capacitance
   - Junction Parasitic capacitance
   - All of the mentioned

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Junction Parasitic capacitance

9) The amount of parasitic capacitance at the output nodes is determined by
   - Conduction of the p-n junction
   - Size of the real area of the diffusion area
   - Charge stored in the capacitor
   - None of the mentioned

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Conduction of the p-n junction

10) Which of the following is dominant component in output capacitance
    - Gate diffusion capacitance
    - Gate parasitic capacitance
    - Source diffusion capacitance
    - None of the mentioned

No, the answer is incorrect.
   Scene: 0
   Accepted Answers: 
   - Gate diffusion capacitance