

Exam 28.1.19

- 1) Explain the following Liberty format term meanings timing arc wise
 - a. rise_transition (1p)
 - b. cell_rise (1p)
 - c. fall_transition (1p)
 - d. cell_fall (1p)
- 2) Explain the following terms related to memory elements
 - a. setup_time (1p)
 - b. hold_time (1p)
 - c. preset signal (1p)
 - d. clear signal (1p)
- 3) Explain the following timing senses
 - a. negative unate (2p)
 - b. non-unate (2p)
- 4) Explain, what is included in the Abstract level standard cell layout. (4p)
- 5) Major improved modelling properties in Composite Current Source (CCS) model as compared to the older model. (4p)