

1. Explain the following terms in detail: (60%)

- (a) clock skew problem (b) setup time**
- (c) functional simulation (d) Design for testability**
- (e) hold time (f) hard IP**

2. Describe the difference between full custom and Cell-based design flow. (20%)

3. Suppose you have completed a circuit design with hardware description language. Please describe the advantages and disadvantages of implementing your circuit with (a) ASIC and (b) CPLD/FPGA, respectively.