1. Explain how control signals in Slide 20 (Chapter 4) work.

2. What is the minimum number of cycles needed to completely execute n instructions on a CPU with a k stage pipeline? Find a formula.

3. Add NOP instructions to the code below so that it will run correctly on a pipeline that does not handle data hazards.

```
addi $s0, $s1, 5
add $s2, $s0, $s1
addi $s3, $s0, 15
add $s4, $s2, $s1
```

4. Explain the condition of data hazards in slide 69.

5. Draw the figure in Slide 75.

6. Explain the condition for load-use hazard in Slide 77.