

Study Questions (Chapter 03 – Part 9)

1. Write an ARM LDR/STR address register indirect instruction(See slide 130).
 - a) Encode this instruction to machine language.
 - b) Use the ARM simulator to verify that your answer is correct.
 - c) Decode the generated machine language instruction to generate the original assembly instruction.
2. Write an ARM LDR/STR program counter relative instruction(See slide 130) .
 - a) Encode this instruction to machine language.
 - b) Use the ARM simulator to verify that your answer is correct.
 - c) Decode the generated machine language instruction to generate the original assembly instruction.
3. Write an ARM LDR/STR address register indirect with offset instructoin(See slide 130) .
 - a) Encode this instruction to machine language.
 - b) Use the ARM simulator to verify that your answer is correct.
 - c) Decode the generated machine language instruction to generate the original assembly instruction.
4. Write an ARM LDR/STR address register indirect with index instructoin(See slide 130).
 - a) Encode this instruction to machine language.
 - b) Use the ARM simulator to verify that your answer is correct.
 - c) Decode the generated machine language instruction to generate the original assembly instruction.
5. Write an ARM LDR/STR address register indirect with offset and pre-update instructoin(See slide 130) .
 - a) Encode this instruction to machine language.
 - b) Use the ARM simulator to verify that your answer is correct.
 - c) Decode the generated machine language instruction to generate the original assembly instruction.
6. Write an ARM LDR/STR address register indirect with index and pre-update instructoin(See slide 130).
 - a) Encode this instruction to machine language.
 - b) Use the ARM simulator to verify that your answer is correct.
 - c) Decode the generated machine language instruction to generate the original assembly instruction.
7. Write an ARM LDR/STR address register indirect with offset and post-update instructoin(See slide 130) .
 - a) Encode this instruction to machine language.
 - b) Use the ARM simulator to verify that your answer is correct.
 - c) Decode the generated machine language instruction to generate the original assembly instruction.
8. Write an ARM LDR/STR address register indirect with index and post-update instructoin(See slide 130).
 - a) Encode this instruction to machine language.
 - b) Use the ARM simulator to verify that your answer is correct.
 - c) Decode the generated machine language instruction to generate the original assembly instruction.