Midterm review:

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**Topics to look for:**

Preparation: work through quiz1 and quiz2; lecture slide concepts, textbook exercises

English sentences to propositions and vice versa

Please note that (for ch1 and ch2) You really don't need to learn to prove any laws; however, you should understand all the basic definitions and symbols so that you can apply your knowledge to solve the problems. By basic I mean to know de morgan law, and , or, not, xor, nand, nor, quantifiers, tautology, contradiction, satisfiable, and terms like that.

Know matrix multiplication and boolean matrix operations

Revise set concepts, definitions like power sets, empty sets, subsets, set builder notation, union, intersection etc. Size/cardinality of union of sets.

ques based on big O estimates and related constants c, k, n.

Know your big O functions well (for example refer the graph in slides showing the behavior of various O(g(x))--- The one that shows the growth of the functions?

Time complexity questions

You may be asked to devise an algo for a common problem and count the least number of comparisons it may make

ques on definition of a|b, some of its properties

hash function application

questions based on (any, like 5, 3, 7,…) base conversions, adding, multiplying.

Practice your airline ticket identification problem. Revise valid UPC and ISBN questions.

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from chapter 5 you should know the application of mathematical induction for proving (know your basis and inductive steps well), applying the recursive definition to find further elements in a series or identifying whether a recursive definition is valid. Defining sets using recursive definition.

That’s it !!!