The following are some suggestions as to topics to spend time studying. This list or any list like it cannot be expected to cover each and every topic possible for the upcoming exam. However, it should give you a reasonable idea as to the breadth of material. My suggestion is to use this list as a way to help you organize your notes and your reading. "***" indicates material not covered in lecture that you need to read independently in your text.

**PLEASE REMEMBER THAT OUR START TIME IS 10:30am on THURSDAY!!!**

**Comprehensive Portion**
Study old exam essay questions to gather general understanding. Review concepts generally from the semester for overview of topics. If you understand the essay questions, and a general re-examination of your notes, you will do fine on the comprehensive portion. If you find things in your overview of the essay questions or your notes, read those topics for deeper understanding.

**Chapter 9**
basics of homeostasis
thermoregulation in iguanas
fluid balance and osmosis
osmotic thirst and hypovolemic thirst
the role of vasopressin
Brattleboro rats as a model for examining thirst
insulin & glucagon related to glucose homeostasis
renal function basics
nephron basics
podocytic cells
information about prolactin and oxytocin related to nursing

**Chapter 10 & 11**
the various sorts of rhythms discussed
De Mairan’s experiment
examples of various rhythms
rodent models of circadian rhythms
ultradian and infradian
the role of the suprachiasmatic nucleus in rhythms
three main components of the biological clock in mammals
Table 10.1
the catecholamines
positive and negative effects of the catecholamines on various tasks
prolactin and its potential to be a positive and negative effector for gamete

**Chapter 12 & 13**
hormones and learning
arousal and learning
epinephrine and learning
the inter-relatedness of epinephrine and glucose on learning
the Morris Water Maze and the examples of how it assesses spatial learning
how the Morris Water maze has been used to test stress
the radial arm maze... how it can be used and ***what it is used for based upon examples in the book
human sex differences in spatial learning tasks
the thyroid gland and its hormones
the cellular location for the production of thyroid hormones
goiter - causes, effects, and different ways in which the endocrine system participates
the details on the catecholamines
how the catecholamines are involved in stress responses, and how they are used as neurotransmitters
nicotinic, muscarinic and cholinominetic agents
mood scale
moods and cortisol
the various experiments examining mood and cortisol levels
serotonin and its role in depression
SSRI’s and their various methods of action
Seasonal Affective Disorder.... potential associations with cortisols and with melatonin.