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.

**Early Chapters**

Study your old exams..... if you understand the CONCEPTS (not simply memorizing answers) in the questions you should be fine.

Please note that the next three topics (in italics) are primarily review topics...but be sure to examine the ***topics which may be new.

**Heart and Blood Chapters**

blood flow pathways - be able to trace a blood cell as it goes through the entire circuit in the somatic body, the pulmonary flow, and through each part of the heart

 coronary arteries - location, function

 all or none response in contraction of muscle

 ***disease of the heart... angina, congestive heart failure

**Vessel Specifics**

***factors influencing blood flow and viscosity (for example, where blood is most prominent during exercise, during rest, and what happens to blood in times of dehydration for example)

**Lymph & Lymph Flow Chapters**

path of lymph flow in the body

 comparison to blood vessels.

 composition of the fluids associated with lymph

**The Respiratory System**

***respiratory acidosis

 hemoglobin, structure, function

 branching into the lungs, the movement of air in and out of the lungs

 characteristics of the trachea

 association of the trachea and esophagus

 various breathing measures

 **surfactant... importance in babies

**The Digestive System**

 movement of material through the digestive system

 peristalsis

 changes in food in the system

 physical versus chemical digestion

**Nutrition**

 cholesterol, fat, proteins, carbohydrates

 muscular development in the digestive system

 **tongue, uses of pharynx and subregions

 **liver functions

 the various tubular designs in the digestive system

**Urinary System**

 pathway of urine formation

 concentration of urine

 structure of kidney and associated structures (from lab)

 functional unit of the kidney

 daily urine production

 storage features of the bladder

 **water intoxication

 functions of the kidney

**Reproductive Systems**

 ***risk factors for testicular cancer

 function of the uterus

 comparison of ova and sperm

 secondary sexual characteristics

 mature sperm - sex cell characteristics

 function of the gonadal hormones

 gametogenesis and subdivisions

 polar bodies associated with ova

 **capacitation of sperm

rat sexual behaviors

 from lab, and....

 *** Did you know that the female rat will display a stereotypical dorsiflexion of her back that is called "lordosis" when she is engaging in reproductive behavior?

 ***Did you know that the male rat will display a series of three behaviors called mounts, intromissions, and ejaculations when he is engaging in reproductive behavior?

 ***Did you know that an intromission is a very brief insertion of the penis into the vagina that is displayed by the male rat and any species that has multiple sized litters? The intromissions a female receives will increase the number of ova she releases for fertilization?

**Historical Figures in Anatomy & Physiology**