Student Learning Outcomes/Review Sheet for Exam #4

By the completion of this unit, the student will be able to do the following:

1. Discuss the anatomy and physiology of the heart.
   – blood flow thru chambers
   – conduction system
   – a myocardial action potential

2. Define the waves and segments associated with a normal EKG for a heartbeat.

3. Define the following disease condition:
   a. CHF
   b. arteriosclorosis
   c. artherosclorosis
   d. angina
   e. myocardial infarction
   f. arrhythmias

4. Discuss, briefly, the anatomy and physiology of the kidney’s nephron:
   – reabsorption
   – secretion
   – filtration

5. Define hypertension and identify ranges/classifications for blood pressure readings:
   – diastolic
   – systolic

6. Describe the MOA for the following drug classes:*
   a. cardiac glycosides
   b. vasodilators EX: nitrates
   c. calcium channel blockers
   d. peripherally – acting α-1 blockers
   e. ACE inhibitors
   f. Diuretics
      – thiazides and thiazide-like
      – loops
      – potassium sparing
   g. Angiotensin II receptor agents
   h. Renin inhibitors

   *Identify examples from each for matching on exam.
7. Identify major side effects for the drug classes mentioned above.
   EX:
   – Identify which class causes syncope.
   – Identify which class causes headaches.
   – Identify which classes cause hypokalemia.
   – Identify which classes cause hypercalcemia.

8. Create a list of the drug classes discussed in this unit and identify the conditions in which they treat.
   EX:
   – Beta blockers Treat:
     a.
     b.
     c.
   – Calcium Channel Blockers Treat:

9. Discuss the differences between right and left side heart failure symptoms and drug treatment options.

10. Define the difference between anti-coagulant, thrombolytic enzymes, and coagulants.

11. Define anemia and their deficiencies. Identify who are more prone to iron deficiency anemia.
    Men or Women?

12. Define ADH and aldosterone’s actions.

13. Discuss hyperlipidemia and drug therapy options.
    – Identify their normal levels
    – Identify different types of cholesterol
    – Identify the agents to treat hyperlipidemia.
    – Identify the main, common characteristic side effects of each anti-hyperlipidemic drug class.


15. Describe some patient teaching associated with starting anti-hypertensive medications.
    EX:
    – take a daily BP reading before taking medications
    – keep appointment with doctors
    – focus on side effects of thiazide diuretics (patient teaching)
16. Discuss key points with the drugs digoxin (Lanoxin®), furosemide (Lasix®), and nitroglycerin (Nitro-Bid®):
   EX:
   - pt counseling tips
   - side effects
   - dosing
   - purposes
   - important things to be aware of
   - pay attention to drug profiles for each

17. Describe the Renin-angiotensin-Aldosterone system, and where ACE inhibitors, angiotensin II receptor agents, and renin inhibitors work on this system.

18. Define the differences between the 3 types of angina.

19. Describe the purpose, function, and classification of drugs used to treat high cholesterol (there are 6 different types).

20. Recall the stepped treatment approach for hypertension.

21. Define digitalization and what medication is involved in this process.

22. Discuss when to use the different kinds of calcium channel blockers in certain patient conditions. Hint: focus on the mechanism of action of each sub-class (dihydropyridines vs. nondihydropyridines).

23. Discuss the side effects and counseling (patient teaching) for clients taking diuretics and anti-hypertensives. Main emphasis should be on thiazide diuretic side effects.

24. Discuss the differences in the MOA’s of the anti-arrhythmics, i.e., Class IA, Class IB, Class II, Class III, and Class IV.

25. Discuss the role of aliskiren (Tekturna®) in the treatment of hypertension as it relates to the renin-angiotensin-aldosterone system.