

## Lipids Proteins and Vitamins Review

1. The Kjeldahl procedure makes what **2** assumptions?
2. A patient confined to bed (non-ambulatory) will have a total protein that is \_\_\_\_\_ than an ambulatory counterpart. Please explain?
3. Which of the common albumin dyes is most specific for albumin?
4. The pH of a protein electrophoresis should be:
5. The above pH causes the proteins to be \_\_\_\_\_ charged
6. As a result the proteins will travel towards the: anode/cathode (circle one)
7. What PEP pattern is most closely identified with cirrhosis? Draw the PEP below:
8. Which of the following proteins is associated with myocardial infarction:
  - a. Prealbumin
  - b.  $\alpha$ 1-Antitrypsin
  - c. cTn
  - d. AFP
9. The patient has recently suffered an acute hemolytic episode resulting in massive intravascular hemolysis. What would you expect the haptoglobin level to be? Why?

10. Please list the lipoproteins in order of density from least to most

11. Please describe the function of each lipoprotein:

LDL:

HDL:

Chylomicron:

VLDL:

12. Please rearrange the Friedwald Equation so that VLDL may be calculated using LDL, total Chol. and HDL.

13. What is the HDL cutpoint as established by the NCEP and what does it represent?

14. Please describe the purpose of a “double-cuvette blank” with regards to triglyceride testing?

15. Please explain the methodology of current automated HDL testing?

16. Please explain how we do not routinely measure LDL but do report it on all lipid panels? Why do we ever measure it?
17. Which lipoprotein contains the highest relative amounts of protein?
18. Specifically, which class of lipid does turbidity suggest an elevation of? Which lipoprotein(s)?
19. Explain how highly buffered, alkaline urine creates a false positive dipstick protein reaction
20. Please explain the difference and relationship between apolipoproteins and lipoproteins
21. Identify the molecule characterized by the following constituents
- a. Apo B48
  - b. Apo B100
  - c. Apos AI, AII
  - d. Kringle sequences
  - e. Copper
  - f. Many bound substances i.e. drugs, bilirubin, ions etc...
22. Please draw the formation of a peptide bond
23. Why is serum protein electrophoresis preferred to plasma?
24. Please explain the clinical significance of AAT

25. Please list and explain the causes for hyperalbuminemia
26. There are two proteins that are indicative of protein intake, what are they and how do their indications differ?
27. How long should a patient fast before a lipid profile, why?
28. Which dyslipoproteinemia results in increased IDL? What is the cause?
29. Please describe the functions of Apo C-II
30. Please describe the contents of intestinal lipid micelles
31. Spell the name for the backbone molecule from which cholesterol is derived