

Water Soluble Vitamins Problem Set 2019 – Part 1 - Xu

1. What type of reactions use thiamin as a necessary cofactor? Does the pyrimidine ring or thiazole ring play a greater part in the reaction mechanism?

2. Provide three reasons that alcoholics may be deficient in thiamine. What disease might result from chronic deficiency state?

3. What test is done to check thiamin deficiency?

4. What test is done to check riboflavin deficiency?

5. How does riboflavin play the role of antioxidant in human physiology?

6. What vitamins are involved in pyruvate dehydrogenase?

7. What is the coenzyme form of Vitamin B6 and why is it contraindicated with levo-DOPA therapy?

8. How is low Vitamin B6 diagnosed?

9. What kind of drug can cause vitamin B6 deficiency? What is the mechanism?

10. What can cause Wernicke-Korsakoff syndrome?

11. What is the role of vitamin B6 in homocysteine metabolism?

12. What are the definitions of EAR, RDA, UL, and daily value (DV)?

13. Please write the products for the following transformations and specify which vitamins participated as a cofactor.

