1. A dietary protein that does not contain all the non essential amino acids is:
    a. A complete protein
    b. An incomplete protein because it is poorly digested
    c. May or may not be complete depending on whether or not it contains all the essential amino acids
    d. Not fit for human consumption
    e. A protein that the body cannot use unless one is engaged in very vigorous PA
2. If you choose to, you can meet your protein requirement without consuming animal proteins. To that end, which of the following pairs represents an effective complementary food combination?
    a. Rice and lentils
    b. Rice and barley
    c. Tofu and red beans
    d. A and B
    e. B and C
3. One of the following is an enzyme that is important for the digestion of protein. Which?
    a. Leucine
    b. Pepsin
    c. Pancreatic amylase
    d. HCl
    e. B and D
4. In which of the following is/are the conditional AA matched to the AA from which they are derived?
    a. Tyrosine/Phenylalanine
    b. Cysteine/methionine
    c. Tyrosine/tryptophan
    d. B and C
    e. A and B
5. In individual with the disease Phenylketonuria, this amino acid becomes and essential AA. Which one?
    a. Lysine
    b. Glutamine
    c. Alanine
    d. Glutamic Acid
    e. Tyrosine
6. Non-essential (dispensable) AA are so called because_____.
    a. They are abundant in food of various kind and stable to oxidation and food preparation.
    b. The body can make them in an amount that is sufficient to meet the body's needs.
    c. They are not required to make proteins and so they are dispensable in metabolism.
    d. Proteins made from these AA are non-essential (dispensable) in the
    e. C and D

7. The quality of a dietary protein is dependent on
    a. The essential AA composition and palatability of the protein
    b. Whether the protein is of plant or of animal origin
    c. The essential AA component and digestibility of the protein
    d. The amount of branched-chain AA that is present in the protein
    e. The essential AA composition of the protein

Adle is a 30 year old York University student. He weighs 70 kg and he is not a vegetarian. Answer Q 8-10.

8. In the absence of any additional information, how much protein should Adle consume per day?
    a. 56 g
    b. 40 g
    c. 100 g
    d. 150 g
    e. 30 g
9. Adle depends on Tuna fish to meet his protein requirement and one serving of Tuna contains 30 grams of protein, approximately how much serving of Tuna does he need to consume per day?
    a. 2 servings
    b. 4 servings
    c. 1 serving
    d. 10 servings
    e. 15 servings
10. If Adle is an avid strength trainer, his protein requirement would be:
    a. 112 - 119 g/day
    b. 112 - 119 g/week
    c. 56 - 104 g/day
    d. 56 g/day
    e. 126 g/day

As a part of a medical team that recently visited a village in South America, you notice that the residents of the village were all farmers. They plant grains (rice and corn) and legumes (soybeans, lentils). Many of the children (4-6 yrs. of age) had a swollen belly, almost as if they were pregnant. On further examination, you and the team could not find any evidence that the children were suffering from any infectious disease. Using this information and materials you have learned in the course, answer numbers 11 and 12.

11. Give one reason for the swollen belly observed in those kids.
    a. They have a swollen belly because they have been drinking too much water.
    b. The swollen belly is likely a result of carbohydrate insufficiency.
    c. The swollen belly is because of energy malnutrition.
    d. The kids might be suffering from malnutrition.
    e. B and C are correct.

12. If you were to recommend a solution to correct the defect you suspected, what would be the most appropriate recommendation?
    a. The parents should ensure that at each meal, the kids always have grains and legumes as a part of their diet.
    b. The kids need to drink less because excessive water intake is making their bellies to swell.
    c. The parents need to ensure that their kids always have meat in every meal as a plant food source cannot supply the nutrients that the kids need.
    d. The parents need to drink less water during pregnancy. This would likely help.
    e. The people need to move from their village to urban centers where immediate medical attention is available.
13. These minerals function mainly in maintenance of fluid balance. Which?
    a. Na, K, Cl
    b. Ca, K, SO_4
    c. Ca, P, K
    d. Na, K, SO_4
    e. B and C
14. Which of the following is true about dietary sodium?
    a. Much of the sodium we consume arrives from a selection of foods that are naturally rich in Na.
    b. 75 % of daily sodium consumption comes from processed foods.
    c. 75 % of daily sodium consumption comes from table salt.
    d. Foods that are high in potassium can lead to sodium toxicity
    e. A and B
15. Regarding blood pressure, identify the statement/s that is/are correct.
    a. High K intake has a protective effect against hypertension.
    b. High Na intake has a protective effect against hypertension.
    c. 9 % of incidence of hypertension can be linked to high Na intake.
    d. Low K intake has a protective effect against hypertension
    e. C and D correct.
16. The most important dietary (non-medical) management practice to control hypertension is:
    a. Consumption of low Na diet
    b. Consumption of low Cl diet
    c. Weight control
    d. High protein diet
    e. Low protein diet
17. A mineral that is involved in protecting the body from damage due to reactive oxygen species is:
    a. Selenium
    b. Superoxide dismutase
    c. Catalase
    d. Aldolase
    e. B and C

18. The carotenoid that can be most effectively converted to Vitamin A is:
    a. Alpha carotene
    b. Beta carotene
    c. Beta carotenoid
    d. Retinal
    e. Retinol
19. An individual that has been on a low fat diet for a prolonged period of time might experience deficiency of which of the following nutrients?
    a. Vitamin A
    b. Vitamin C
    c. Sodium
    d. Vitamin D
    e. A and D
20. Regarding the vitamins, which of the following is true?
    a. Excess fat soluble vitamin is stored in the body so an individual who does not consume these vitamins over a few days might not experience deficiency symptoms.
    b. Fat soluble vitamins are stored in the body, therefore these vitamins cause no toxicity
    c. When dietary intake of vitamins is limited, one is more likely to experience the deficiency of water soluble vitamins compared to the fat soluble ones
    d. Vitamin C is the most toxic of all vitamins
    e. A and C
21. About 99 % of body store of vitamin A is found in the:
    a. Adipose tissue
    b. Liver
    c. Kidney
    d. Skin
    e. Spleen
22. The deficiency of Vitamin A in the cornea can lead to:
    a. Night blindness
    b. Scurvy
    c. Xerophtalmia
    d. Retinoma
    e. Excessive wetness of the cornea

From the list below, choose the vitamin that is used in making the proteins indicated in questions 23-25.

    a. Vitamin C
    b. Fluoride
    c. Sodium
    d. Vitamin K
    e. Potassium

23. Collagen 24. Osteocalcin 25. Prothrombin

From questions 26 to 28, match the vitamins to the indicated features.

a. Main dietary source for North America is milk
b. Functions as an antioxidant
c. Given newborns at birth

26. Vitamin D 27. Vitamin K 28. Vitamin E

29. In which of the following is/are the deficiency symptoms/diseases matched to the appropriate vitamins?
    a. Vitamin D / Erythrocyte homlysis
    b. Vitamin C / Scurvy
    c. Vitamin A / Night blindness
    d. A and B
    e. B and C

Mrs. Stones is an 80 year old Caucasian widow. She has heard a lot about Osteoporosis and was glad to learn that you are taking KINE 4020, use this information to answer questions 30 and 31.

30. Given the information you have, you will conclude that she has a relatively high risk of developing osteoporosis because
    a. She is a Canadian
    b. She is a Caucasian
    c. She is 80 years old
    d. A and C
    e. B and C
31. From your conversation, you discover that she might not be consuming enough Ca. Thinking of taking supplements, you will advice that she should aim for ~1g (1000 mg) per day and
    a. She should ensure that she takes supplements that deliver at least 1 g Ca per tablet (dose) and take a single tablet once daily
    b. She should take tablets that deliver 500 mg Ca per tablet and take 1 tablet in the morning and another at night
    c. She should take tablets that deliver 1.5 g Ca per dose, taken once daily
    d. The aunt should consume whole-wheat grains as these are excellent source of Vitamin D
    e. Abstain from Vitamin K as this has a negative interaction with Vitamin D
32. Hepercalcemia can result from
    a. Excessive vitamin D intake
    b. Excessive Ca intake
    c. Excessive Ca intake Vitamin K
    d. High calcitonin activity
    e. A and B

33. Which of the following is/are associated with vitamin D deficiency?
    a. Rickets in children
    b. Osteomalacia in children
    c. Pellagrea
    d. A and B are correct
    e. A and C are correct
34. The form of vitamin A that is important for vision is _____.
    a. Retinoic acid
    b. Retinal
    c. Retinol
    d. B-Carotene
    e. A and C
35. Regarding Ca metabolism, which if the following is the most accurate?
    a. When blood Ca levels go up, calcitonin is released causing increase in blood Ca level.
    b. When there is low dietary Ca, parathyroid hormone is released which promotes the release of Ca from bones.
    c. When there is low dietary Ca, calcitonin is released from the parathyroid leading to decreased activation of Vitamin D
    d. When there is excess Ca in the body, Vitamin D promotes Ca storage in the kidney
    e. When there is excess Ca in the body, Vitamin D promotes Ca storage in the parathyroid gland.