**King Saud University Applied Medical Sciences College**

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**Community Health Department**

**CHS 261 (Mid Term 2)**

**Time Allotted: 2 hours**

**Name:……………..................................................**

**Student ID NO.:………………………………….**

**Q1: Fill in the blanks (3 marks):**

1. Men have higher water content than women because …………………………………………………………………………………………………
2. The ………………. end of an amino acid is a characteristic of all acids and as ion carries a negative charge.
3. …………………..assists in the formation of choline, a precursor of acetylcholine
4. Fatty acids are stored in the body in the form of …………………
5. ………………….. refers to the steady state that exists between protein synthesis and breakdown.
6. ………………..is a steroid that travels in the blood attached to long chain fatty acids.

**Q2: True and False: (4 marks):**

***Read the following statements, and put (T) for the correct statement and (F) for the wrong one, with the correction of the wrong statements. (the words NOT & NO are not allowed)***

1. An example of a structural protein is the Hemoglobin. F Collagen
2. Most of our body water requirements can be met by water in foods. F by thirst
3. In severe illness albumin is broken down to supply amino acids for the synthesis of new proteins needed to meet the body emergency need. T
4. The essential FAs regulate the production of the enzymes needed for the synthesis of nonessential FAs in the muscles. F in the liver
5. When glucose is readily available, protein is not used for energy. T
6. Medium chain FAs are difficult to absorb and require a helping carrier. F long chain FA
7. Chemotropisn is an enzyme for protein digestion which is secreted in the small intestine. T
8. Most natural lipids from either animal or plant sources are triglycerides.T

**Q3: Comparison Question: (3.5 marks):**

***Compare between Marasmus and Kwashiorkor in the following points:***

|  |  |  |
| --- | --- | --- |
| **Kwashiorkor** | **Marasmus** |  |
|  |  | ***Edema*** |
|  |  | ***Mental changes*** |
|  |  | ***Growth failure*** |
|  |  | ***Dermatosis, flaky-paint*** |
|  |  | ***Appetite*** |
|  |  | ***Fatty infiltration of the liver*** |
|  |  | ***Development ( acute or chronic)*** |

**Q4: Multiple Choice Questions: (8.5 marks):**

**Choose only one correct statement from the followings:**

1. **Coconut oil, and palm kernel oil are the most known:**
   1. Saturated fatty acids
   2. Monounsaturated fatty acids
   3. Polyunsaturated fatty acids
   4. None of the above
2. **All the following statements about an amino acid are true except:**
   1. Several amino acids contain sulfur
   2. It carry out the life-sustaining task of building and rebuilding body tissues
   3. It has an amphoteric nature that is able to protect a solution against large changes in Ph.
   4. Essential amino acids is the one which must be supplied in food
3. **All of the following statements regarding Na+ are true except:**
   1. It is an anion that regulates fluid balance
   2. Considered as electrolyte
   3. It bounds with albumin in the interstitial fluid to regulate fluid balance
   4. All statements are true
4. **All of the followings are true about Glutamine except:**
   1. It is an essential (indispensible) amino acid.
   2. protects the mucosal surface of the intestine
   3. enhances the production of white cells
   4. self medication with Glutamine supplements could be dangerous
5. **All of the followings about a polyunsaturated fatty acid are true except:**
   1. Referred to as n-3 or n-6 fatty acids
   2. Canola oil and olive oil are examples
   3. Have two or more spaces unfilled with hydrogen
   4. Have two or more double bonds
6. **Fibrinogen is a blood protein which is important in:**
   1. Immune function
   2. Fluid balance
   3. Metabolic activities
   4. Blood clotting
7. **All the followings about fat replacers are true except:**
   1. They are carbohydrates-plant polysaccharides, celluloses, or gums
   2. Food made from fat replacers are always lower in kcalories than those made with fat
   3. Food that is made with a fat replacer may contain the same number of kcalories or even more kcalories than its higher fat counterpart
   4. Fruit purees made from apples or prunes are used as fat replacers
8. **Age-related decreases in the neurotransmitter ………. are associated with Parkinson's disease:**
   1. Acetylcholine
   2. Dopamine
   3. Serotonin
   4. Epinephrine
9. **Dense tissue fluid is a section of the:**
   1. Extracellular fluid
   2. Intracellular fluid
   3. Interstitial fluid
   4. Secretary fluid
10. **All the following statements are wrong except:**
    1. When less protein is supplied in the diet: protein is conserved and protein losses minimized.
    2. When fighting infection, the body breaks down available protein reserves to obtain amino acids for making energy.
    3. When more protein is available than is needed for body growth or repair: amino acids are synthesized.
    4. When proteins are broken down, they can't be used again to form new proteins.
11. **Regarding phospholipids:**
    1. The phosphate end of these molecules is fat soluble
    2. The phosphate end of these molecules is water soluble
    3. They have an important role in the structure of nervous system
    4. molecules in which one of the three fatty acids is attached to a steroid base
12. **Lower protein turnover can be found in:** 
    1. Muscle
    2. Kidney
    3. Pancreas
    4. Intestinal mucosa and liver
13. **The branched-chain amino acids ……, …….., and ……. improve nitrogen retention and appetite in patients with liver disease**
    1. Arginine, isoleucine, and valine
    2. Leucine, isoleucine, and valine
    3. Leucine, isoleucine, and glutamine
    4. Leucine, tyrosine, and valine
14. **Cholecystokinin is secreted in the:**
    1. Mouth
    2. Stomach
    3. Pancreas
    4. Small intestine
15. **………….** **includes all plant foods, dairy, and eggs**
    1. Ovolactovegetarian
    2. Lactovegetarian
    3. Vegan
    4. Flexitarian
16. **ω-3 and ω-6 fatty acids have an important role in:**
    1. skin integrity
    2. blood platelet aggregation
    3. Synthesis of hormone-like agents
    4. All of the above.
17. **Fluid intake need to be increased in the following situation/s:**
    1. Renal failure
    2. High protein diet
    3. Edema
    4. All of the above

**Q5: Answer the following question (1 mark):**

**What is the role of Albumin in controlling the colloidal pressure? And how does the deficiency of albumin can lead to Edema?**

GOOD LUCK ☺