

**Course Title: Medical Biochemistry II**

**Radiology 2<sup>nd</sup>, Sec A**

**Student Name: Kamran Ahmad**

**Student ID: 16203**

**Max Marks: 30**

---

**Note: There are TWO sections**

**Section A consist of 15 MCQs and 10 match column questions, each carry ONE mark with grand total of 25 marks.**

**Choose the appropriate option and write in the ANSWER section.**

**Section B consist of 2 short questions, with grand total of 5 marks**

**Write to the point answers, do not give explanation.**

**ATTEMPT all questions of Section A and Section B**

---

## **SECTION A**

### **1. Malnutrition means**

- a. A person is not eating properly.
- b. May mean undernutrition or over nutrition.
- c. Someone is starved.
- d. Someone is eating too much.

### **2. The first reaction in the citric acid cycle is binding**

- a. Carbon dioxide to a four-carbon (C4) molecule.
- b. Acetyl-CoA to a C4 molecule.
- c. Acetyl-CoA to a C5 molecule.
- d. Acetyl-CoA to citric acid.

### **3. Macronutrients that provide energy include all except:**

- a. carbohydrate
- b. Proteins
- c. Fats
- d. Fiber

- 4. Which process produces both NADH and FADH<sub>2</sub>?**
- The citric acid cycle
  - Glycolysis
  - Urea cycle
  - The preparatory reaction
- 5. Which nutrient provides the most amount of energy per gram?**
- Carbohydrate
  - Fats
  - Protein
  - Vitamin
- 6. At what age do people suffer the most from malnutrition?**
- Elderly
  - Teenagers
  - Elderly and Children
  - Teenagers and Children
- 7. The preparatory steps of glycolysis breaks**
- Glucose into pyruvates.
  - Pyruvates into glucose.
  - Glucose into glyceraldehyde-3-phosphate.
  - Pyruvates into acetyl-CoA and CO<sub>2</sub>.
- 8. Which statement about glycolysis is correct?**
- Resulting pyruvate molecules are always directly incorporated into the Krebs cycle
  - Glycolysis cannot proceed under anaerobic conditions
  - Three molecules of NADH<sub>2</sub> and one molecule of FADH<sub>2</sub> are produced
  - Two net molecules of ATP are produced through substrate-level phosphorylation.

**9. Which of the following is a product of glycolysis?**

- a. GTP
- b. Glucose
- c. NADH
- d. Acetyl CoA

**10. Which of the following biological processes will occur under both aerobic and anaerobic conditions in humans?**

- a. Citric acid cycle
- b. Glycolysis
- c. Krebs cycle
- d. Urea cycle

**11. Meat and fish provide the following important nutrient**

- a. Carbohydrate
- b. Protein
- c. Lipid
- d. Fiber

**12. Which of the following products is not created by aerobic glycolysis?**

- a. Pyruvate
- b. Lactic acid
- c. NADH
- d. ATP

**13. Which of the following is not include in the symptoms of kwashiorkor.**

- a. Cracked and scaly skin
- b. Loss of appetite
- c. Excess sweating
- d. Learning disability

**14. What is the definition of overweight?**

- a. BMI > 18.5
- b. BMI 18.5 - 24.9
- c. BMI 25-29.9
- d. BMI 30 and higher

**15. Which of the following is not true of the citric acid cycle?**

- a. All enzymes of the cycle are located in the cytoplasm, except succinate dehydrogenase, which is bound to the inner mitochondrial membrane.
- b. In the presence of malonate, one would expect succinate to accumulate.
- c. Oxaloacetate is used as a substrate but is not consumed in the cycle.
- d. Succinate dehydrogenase channels electrons directly into the electron transfer chain.

**Match column A with column B and write the correct option (only correct letter) in column C**

<b>Sr. No</b>	<b>A</b>		<b>B</b>	<b>C</b>
16	Lactate	A	polysaccharides starch	
17	Proper growth	B	Macronutrient	
18	Urea	C	Marasmus	
19	Swelling	D	Triose	
20	Fiber	E	Kwashiorkor	
21	Dietary carbohydrates	F	Anaerobic glycolysis	
22	Enlarged liver	G	Non toxic	
23	Pyruvate	H	Balanced diet	

24	Low calorie intake	I	Unsaturated fat	
25	Canola oil	J	Edema	

## SECTION B

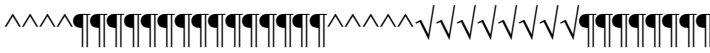
26. Mention the products of Glycolysis? (2)

27. Write down the names of health issues associated with Obesity. (3)

## ANSWERS

1	B	10	B	19	J
2	B	11	B	20	B
3	D	12	B	21	A
4	A	13	C	22	E
5	B	14	C	23	D
6	D	15	A	24	C
7	A	16	F	25	I
8	D	17	H	26	
9	C	18	G	27	

.....



## SECTION B



= Obesity make you more likely to have haigh blood presser and abnormal chlostrool levele which are risk factors for heart diseas and strouck.

= *Diabetes*

Obasity can make effect the way your body use insulien to control blood p  
Sugar level the raise your risk insulien resistance and daibates.

= *Certen cancer*

Obesity may increas your risk of cancer of the uters overy.

*The end*