**Combination of questions for 5. week of lecture**

**Combination 1.**

**1.** What are the two main roles of metabolism?

2. What are Phosphoryl Transferring High Energy Molecules (examples and their role)

**Combination 2**

**1.** Where in the cell the Krebs cycle is taking place and name three regulatory enzymes.

2. What drives a membrane-located ATP synthase to form ATP in the presence of Pi + ADP?

**Combination 3.**

**1.** Name all the enzymes located in mitochondria.

2. What are the products of the Krebs cycle?

**Combination 4.**

**1**. Name all Hydrogen (electron) Transferring High Energy Molecules and state their role.

2. What molecule is the main allosteric inhibitor of citrate synthase?

**Combination 5.**

**1.** Explain the different roles of acetyl CoA depending on the energy status of the cell.

2. Name all the complexes of the respiratory chain.

**Combination 6.**

1. Explain the three stages of aerobic catabolism.

2. What is the sequence of the metabolic pathway from glucose to the respiratory chain?

**Combination 7.**

**1.** What is the right sequence of coenzymes found in alpha-ketoglutarate dehydrogenase?

2. Explain how the cell manages conflicting demands of concomitant catabolism and anabolism.

**Combination 8.**

1. What are the reactions of the Krebs cycle where NADH+H+ is produced?
2. Explain the structure and function of ATP synthase

**Combination 9.**

1. What are the regulatory reactions of the Krebs cycle?
2. Explain the synthesis of ATP when electron transport begins from the first complex of respiratory chain