1. **Complete the following:** (6 marks)
2. Glucagon .................... the blood glucose level.
3. Ketone bodies are ......................**,** ....................... and .................................
4. There are two mechanisms for amino acids absorption; ............................and .........................................

**B- Calculate the total ATP produced from the oxidation of fatty acid which is 24 carbons long?** (2 marks)

**C- Define the following:** (4 marks)

1. Glycogenolysis.
2. Gluconeogenesis.

**D- write short notes on:** (6 marks)

1. Sources of ammonia.
2. Types of lipoproteins.