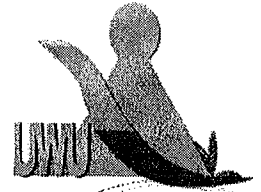


Uva Wellassa University, Sri Lanka
End Semester Examination – January 2010
SCT 323-1 Metabolism



Time: One (01) hour

Total 06 Questions

Answer four (04) questions only

1. (a) Briefly explain what Hexose Phosphate Pool (HPP) is?
(5 marks)
- (b) In photosynthetic tissues, HPP of chloroplast connects with HPP of cytosol via triose phosphates. Whereas in non photosynthetic tissues HPP of plastids connects with HPP of cytosol via hexose phosphates.
Briefly explain the above statement. (8 marks)
- (c) Explain the starch synthesis from cytosolic sucrose in maize endosperm (Use suitable diagrams).
(12 marks)
2. (a) Draw the Urea cycle with relevant enzymes.
(10 marks)
- (b) Miss. S. Tupid refused to take any food for two days. What do you expect to happen in her liver.
(15 marks)
3. (a) What is Hypercholesterolemia?
(2marks)
- (b) State the differences between fatty acid synthesis and beta oxidation.
(5 marks)
- (c) Briefly explain the steps in beta oxidation of unsaturated fatty acids.
(18 marks)

4. (a) Briefly describe debranching process of Glycogen.
(10 marks)

(b) Mr. A has eaten 10 pieces of cakes. Very briefly explain what would happen to his pancreas.
(15 marks)

5. Write short notes on followings.

(a) Importance of Nitrate Reductase pathway.
(7marks)

(b) Anaerobic respiration.
(8 marks)

(c) Regulation of Calvin cycle enzymes by Ferredoxin – Thioredoxin system.
(10 marks)

6. (a) List down major steps in Glycogen synthesis.
(10 marks)

(b) Lance Armstrong has been cycling for three hours and his muscles have started degrading amino acids for energy. Briefly explain what would happen to the removed nitrogen of amino acids in the muscles?
(15 marks)