EASTERN UNIVERSITY, SRI LANKA

THIRD EXAMINATION IN SCIENCE 2008/2009 (June/July 2011)

EXTERNAL DEGREE, SECOND SEMESTER (Proper & Repeat)

EXT BT 303 PLANT BIOCHEMISTRY

Time: 02 hours

Answer all Questions

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1. a) "Glycolytic end product pyruvate has different fates in cells"- Explain.
   b) Briefly discuss the regulatory mechanism of the following biochemical pathways;
      i) Entry of glucose to glycolytic sequence
      ii) Oxidation of Fatty acids

2. a) Outline the catabolic pathway of palmitic acid ($C_{15}H_{31}COOH$) to acetyl co-enzyme A.
   b) Give a balance sheet equation indicating the number of ATP molecules generated when one molecule of palmitic acid is completely broken down to carbon dioxide.

3. a) Outline how the Pentose Phosphate Pathway can supply ribose-5-phosphate for the synthesis of RNA.
   b) Explain how the TCA cycle is linked in the catabolism of proteins.

4. Write a brief account on any <u>TWO</u> of the following:
   a) Enzymes inhibitors in plants cells
   b) Storage forms of polysaccharides
   c) Gluconeogenesis

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