PRACTICE: PENTOSE PHOSPHATE PATHWAY

36. Transketolases transfer parts of sugar molecules to other sugar molecules. The transferred segment is composed of:
    a. 1 carbon
    b. 2 carbons
    c. 3 carbons
    d. 4 carbons
    e. 5 carbons

37. Transaldolases transfer parts of sugar molecules to other sugar molecules. The transferred segment is composed of:
    a. 1 carbon
    b. 2 carbons
    c. 3 carbons
    d. 4 carbons
    e. 5 carbons

38. Which of the following statements about the Pentose Phosphate Pathway is **correct**?
    a. It generates 36 moles of ATP per mole of glucose
    b. It produces 6 moles of CO2 per mole of glucose
    c. It is a reductive pathway consuming NADH
    d. It is present in plants, but not in animals and bacteria
    e. It provides precursors for amino acid biosynthesis

39. Which of the following acts in the Pentose Phosphate Pathway?
    a. glycogen phosphorylase
    b. aldolase
    c. 6-phosphogluconate dehydrogenase
    d. phosphofructokinase-1
    e. pyruvate kinase

40. Glucose labeled with ^{14}C in all of its carbon atoms, is added to a crude liver extract rich in the enzymes of the pentose phosphate pathway. The most rapid production of $^{14}CO_2$ will occur from glucose is carbons:
    a. C-1
    b. C-2
    c. C-3
    d. C-4
    e. C-5