

TABLE OF CONTENTS

INTRODUCTION TO CARBOHYDRATES

MONOSACCHARIDES	4
Chemical formulas	5
Lab Activity #1 - Molecular Model Kit	6
Learning Outcomes Review Questions	6
Practice Test 1 - Carbohydrates and Monosaccharides	7
DISACCHARIDES	8
OLIGOSACCHARIDES	9
POLYSACCHARIDES	10
Learning Outcomes Review Questions	11
Practice Test 2 - Disaccharides, Oligosaccharides, and Polysaccharides	12
Carbohydrate Dehydration Synthesis	13
Lab Activity #2 - Molecular Model Kit	13
Carbohydrate Hydrolysis	14
Lab Activity #3 - Molecular Model Kit	14
Learning Outcomes Review Questions	15
Practice Test 3 - Dehydrations Synthesis and Hydrolysis	16
GLYCOAMINOGLYCANS (GAGs)	17
Proteoglycan Monomer	18
Proteoglycan Aggregates	18
GAGs as Lubricants and Shock Absorbers	19
GAGs in Ground Substance of Loose Connective Tissue	19
GLYCOPROTEINS AND GLYCOLIPIDS	20
Learning Outcomes Review Questions	21
Practice Test 4 - Glycoaminoglycans, Glycoproteins, Glycolipids	22
Practice Test 5 - Terminology Review - Carbohydrates	22
CARBOHYDRATE METABOLISM	23
Glucose from Dietary Carbohydrates	23
DIETARY CARBOHYDRATES	24
Lab Activity #4 - Observation of Starch Grains	24
Lab Activity #5 - Observation of Denatured Starch Grains	25
Lab Activity #6 - Observation of glycogen	26
Lab Activity #4 - Observation of glycogen hydrolysis	26
Learning Outcomes Review Questions	27
Practice Test 6 - Glucose Catabolism - Introduction	28
GLUCOSE CATABOLISM	29
Learning Outcomes Review Questions	30
Practice Test 7 - Glucose Catabolism - Introduction	30
Glycolysis Summary	33
Formation of Acetyl Groups	33
Summary of Formation and Destination of Acetyl Co-A	34
Learning Outcomes Review Questions	34
glucose catabolism Overview	34
Practice Test 8 - Glucose Catabolism Overview	36
KREBS CYCLE	37
Learning Outcomes Review Questions	38
Practice Test 9 - Krebs cycle	38
ELECTRON TRANSPORT SYSTEM	39
Learning Outcomes Review Questions	41
Practice Test 10 - Electron Transport and Summary of Energy Capture	42
Practice Test 11 - Glucose Catabolism - Summary	42

GLUCOSE ANABOLISM	43
Gluconeogenesis	43
Glycogenesis	44
Lab Activity 8 - Glucogenesis	44
Glycogenolysis	45
Lab Activity 9 - Glycogenolysis	45
Learning Outcomes Review Questions	46
Practice Test 12 - Glucose Anabolism	48
Practice Test 13 - Glucose Anabolism - Terminology	48
COPYRIGHT AND PRODUCT DETAILS	49