

OLABISI ONABANJO UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY
2018/2019 HARMATTAN SEMESTER EXAMINATION

COURSE CODE: BCH 403

TIME ALLOWED: 2 Hours

COURSE TITLE: BIOSYNTHESIS OF MACROMOLECULES DATE: 13/05/2019

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE

1. Differentiate between the following pairs giving at least one structural example where appropriate.

- i. Starch and Glycogen
- ii. Chitin and Cellulose
- iii. Pyranose and Furanose Sugars
- iv. Anomers and Epimers
- v. Enantiomers and Diastereomers

vi. Purine and Pyrimidine

vii. Globular and Fibrous Proteins

- a. What are macromolecules?
- b. Discuss in detail, the functions of macromolecules.

3. Write concisely on EITHER proteoglycans OR glycoproteins.

4. a. How is glycogen synthesized?
- b. Write an essay on disorders associated with glycogen metabolism.

5. Explain in detail, how a named nucleotide or lipid is synthesized in an organism.
- b. How is the pathway regulated?

6. Discuss in detail the biosynthesis of peptidoglycan.

