

UNIVERSITY OF BOLTON
SCHOOL OF SPORT AND BIOLOGICAL SCIENCES
BSC (HONS) MEDICAL BIOLOGY
SEMESTER TWO EXAMINATION 2018/2019
MEDICAL BIOCHEMISTRY
MODULE NO: BIO5009

Date: Tuesday 21 May 2019

Time: 2.00 pm – 5.00 pm

INSTRUCTIONS TO CANDIDATES:

Candidates are advised that the examiners attach importance to legibility of writing and clarity of expression. **YOU ARE STRONGLY ADVISED TO PLAN YOUR ANSWERS**

There are **TWO** sections in this paper.

Answer **THREE** questions in total, including **AT LEAST ONE** from **EACH** section.

Each question is worth **50** marks.

The examination has a total of **150** marks.

This examination is **THREE** hours long.

School of Sport and Biological Sciences
BSc (Hons) Medical Biology
Semester Two Examination 2018/2019
Medical Biochemistry
Module No. BIO5009

Answer THREE questions in total, including AT LEAST ONE from EACH section.

Section A: Homeostasis and disease.

Answer AT LEAST ONE question from this section; 50 marks per question.

1. Give an account of the blood-clotting cascade, and explain how various diseases can result from abnormalities in the blood-clotting process.
2. Describe how a human cell controls its proliferation via the cell cycle, and summarise how errors in this process are often involved in the onset of cancer.
3. Explain how a human cell is able to control enzyme activity, and give examples of how this control can go wrong in various diseases.

Section B: Laboratory techniques.

Answer AT LEAST ONE question from this section; 50 marks per question.

4. Explain how recombinant proteins can be synthesised, purified, and subsequently analysed in a medical biochemistry research laboratory.
5. Outline the laboratory techniques available to study haematology. In your answer, you should explain how these techniques are able to diagnose a range of **blood related** diseases.
6. Account for the different types of tests and procedures that take place in a typical NHS clinical biochemistry laboratory as an indicator of overall health in the body. In your answer, you should give examples of how these test results may be abnormal in various **non-blood related** diseases.

[WHOLE PAPER TOTAL: 150 marks]

END OF QUESTIONS

PAST EXAMINATION PAPER