

**UNIVERSITY OF BOLTON**

**SCHOOL OF SPORTS AND BIOLOGICAL SCIENCES**

**BSC (HONS) MEDICAL BIOLOGY**

**SEMESTER ONE EXAMINATION 2019/20**

**MEDICAL MICROBIOLOGY**

**MODULE NO: BIO5010**

Date: Wednesday 15<sup>th</sup> January 2020

Time: 10.00 am - 12.00 pm

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**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**

This examination paper carries a total of 100 marks.

This examination is TWO hours long.

There are EIGHT questions on this examination paper.

There are TWO sections on this paper.

Section A: Answer ALL questions.

Section B: Answer ONE question.

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BSc (Hons) Medical Biology  
Semester One Examination 2019/20  
Medical Microbiology  
Module No. BIO5010

Answer **SIX** questions in total.

Answer **ALL** question in Section A and **ONE** question from Section B.

Make use of labelled diagrams where appropriate.

**Section A – answer ALL questions**

1. Evaluate the importance of aseptic techniques in medical microbiology.  
**10 marks**
2. Distinguish between a virus and a prion.  
**10 marks**
3. What is innate immunity?  
**10 marks**
4. Biological safety cabinets and fume cupboards (fume hoods) look very similar but operate differently. Why is an understanding of both mandatory? Explain your rationale.  
**10 marks**
5. Discuss Koch's postulates.  
**10 marks**

**Total 50 marks**

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**Please turn the page**

**Section B – answer ONE question**

6. Evaluate the usefulness of the technique of flow cytometry in medical biology.  
**50 marks**
7. a) Describe the key stages of the lytic viral replication cycle.  
(30 marks)
- b) Explain how the lytic and lysogenic viral replication cycles differ.  
(20 marks)
- Total 50 marks**
8. a) When using antibiotics distinguish between 'MIC' and 'MBC'.  
(10 marks)
- b) Evaluate the effectiveness of antibiotics on pathogens.  
(40 marks)
- Total 50 marks**

**END OF QUESTIONS**