

**BMI3706**

May/June 2017

**ZOONOSES**

Duration 2 Hours

100 Marks

**EXAMINATION PANEL AS APPOINTED BY THE DEPARTMENT**

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**Closed book examination**

**This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue.**

This paper consists of 2 pages.

**ANSWER ALL THE QUESTIONS**

**Students must answer the questions in the examination answer book provided.**

All the best!

**[TURN OVER]**

**QUESTION 1**

- 1 1 Explain why zoonosis is of such great concern in Biomedical sciences (4)
- 1 2 Differentiate between communicable and non-communicable disease and give examples (4)
- 1 3 Discuss the route of transmission of zoonosis from animals to human beings (6)
- 1 4 Name and discuss the causative agent of Creutzfeldt-Jacob disease (6)
- 1 5 Describe clinical manifestations caused by prion disease in humans (5)
- [25]**

**QUESTION 2**

- 2 1 A 65 year old pet shop owner has been diagnosed with Psittacosis. He had symptoms for 3 days prior to confirmation and notification. What measures should be taken by the public health doctor dealing with this? (5)
- 2 2 As a biomedical scientist, what can you do to help prevent the spread of zoonotic diseases? (5)
- 2 3 Describe the various conditions caused by *Staphylococcus aureus* along with their laboratory diagnosis (10)
- [20]**

**QUESTION 3**

There is a family outbreak of O157.H7 *E coli* on a local farm and the family is quite concerned about the source of the infection, particularly as the two youngest children are hospitalised with hemorrhagic colitis. The farm has a private water supply and a fast food chain restaurant. Outline the steps that should be taken to investigate this outbreak and identify the extent of any sampling that you would request **[15]**

**QUESTION 4**

- 4 1 Discuss the factors that contribute to the emergence of zoonotic disease (10)
- 4 2 Describe the method of prevention of anthrax in animals. (5)
- 4.3 Describe the pathogenesis, laboratory diagnosis and treatment of anthrax (15)
- 4 4 Discuss laboratory diagnosis methods used for confirming rabies virus infection (10)
- [40]**

**TOTAL: 100**