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國立成功大學 104 學年度碩士班招生考試試題

系所組別:細胞生物與解剖學研究所

考試科目:科學英文

考試日期:0212,節次:2

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※ 考生請注意:本試題不可使用計算機。 請於答案卷(卡)作答,於本試題紙上作答者,不予計分。

Please answer following questions based on the content of the paragraphs provided.

I. The Ebola virus causes an acute, serious illness which is often fatal if untreated. Ebola virus disease (EVD) first appeared in 1976 in 2 simultaneous outbreaks, one in Nzara, Sudan, and the other in Yambuku, Democratic Republic of Congo. The latter occurred in a village near the Ebola River, from which the disease takes its name.

The current outbreak in west Africa, (first cases notified in March 2014), is the largest and most complex Ebola outbreak since the Ebola virus was first discovered in 1976. There have been more cases and deaths in this outbreak than all others combined. It has also spread between countries starting in Guineavthen spreading across land borders to Sierra Leone and Liberia, by air (1 traveller only) to Nigeria, and by land (1 traveller) to Senegal. On August 8, the WHO Director-General declared this outbreak a Public Health Emergency of International Concern.

- 1. Please propose a title for this short article. (10%)
- 2. What does EVD stand for? (10%)
- 3. When and where was EVD first identified? (10%)
- 4. When and where does it cause the worst public health crisis in EVD history? (20%)
- II. Satchidananda Panda, a researcher at the Salk Institute for Biological Studies in La Jolla, California, and his team had mice engage in what's called time-restricted-feeding. That is, the mice consumed all their daily calories in an eight-to-12-hour window. And they wound up with markers for health that were better than those of mice free to eat whenever they wanted. For example, time-restricted-feeding reduced whole body fat, inflammation and insulin resistance and improved the mice's glucose tolerance.
- "We were surprised to find that the benefits of time restriction persist even if the mice take the weekends off." So binging on Saturday and Sunday did not wipe out the positive effects.
- "So with this type of therapy you don't really have to calorie count. What really this works on is your own biology and letting your body use its own evolutionary-developed metabolic pathways to shuttle energy appropriately."
 - 5. Please propose a title for this short article. (10%)
 - 6. What kinds of markers for health were measured in their animal experiments? (10%)
 - 7. What would happen if the mice under time-restricted-feeding take two days off every week and are given feeding with no time-restriction during those two days? (10%)
 - 8. Based on the study here, what suggestions can you offer for people to reduce the risks of metabolic syndrome? (20%)