

科目：科技英文 適用：生醫所生醫組 生醫所醫工組

編號：521 531

考生注意：

1. 依次序作答，只要標明題號，不必抄題。
2. 答案必須寫在答案卷上，否則不予計分。
3. 限用藍、黑色筆作答；試題須隨卷繳回。

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一、(20pts, 5pts for each) 類比字 ANALOGIES (In each of the questions, a related pair of words is followed by five lettered pairs of words. Pick up the lettered pair that best expresses a relationship similar to that expressed in the original pair) 請選出與各題原題組最接近的類比字組

1. COLOR : SPECTRUM ::

- A. tone: scale
- B. sound: waves
- C. verse: poem
- D. dimension: space
- E. cell: organism

2. SEDATIVE : DROWSINESS ::

- A. epidemic: contagiousness
- B. vaccine: virus
- C. laxative: drug
- D. anesthetic: numbness
- E. therapy: psychosis

3. BLUEBERRY : PEA ::

- A. sky: purity
- B. potato: raspberry
- C. sky: star
- D. purity: world
- E. sky: grass

4. CURIOSITY : KNOW ::

- A. temptation: conquer
- B. starvation : eat
- C. wanderlust : travel
- D. humor : laugh
- E. survival : live

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二、(50 pts, 10pts for each) 請細讀以下 5 段文章，並將各段文章分別整理寫成 150 字內的中文短文

1. (10pts) Magnetic resonance imaging (MRI) uses radiofrequency waves and a strong magnetic field rather than x-rays to provide remarkably clear and detailed pictures of internal organs and tissues. The technique has proven very valuable for the diagnosis of a broad range of pathologic conditions in all parts of the body, including cancer, heart and vascular disease, stroke, and joint and musculoskeletal disorders. MRI requires specialized equipment and expertise and allows evaluation of some body structures that may not be as visible with other imaging methods. [http://www.radiologyinfo.org/content/mr_of_the_body.htm]

2. (10pts) Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in February 2003. Over the next few months, the illness spread to more than two dozen countries in North America, South America, Europe, and Asia before the SARS global outbreak of 2003 was contained. In general, SARS begins with a high fever (temperature greater than 100.4°F [$>38.0^{\circ}\text{C}$]). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10 percent to 20 percent of patients have diarrhea. After 2 to 7 days, SARS patients may develop a dry cough. Most patients develop pneumonia. [<http://www.cdc.gov/ncidod/sars/factsheet.htm>]

3. (10pts) Bioinformatics is the development and use of computational and mathematical methods for acquiring, storing, analysing and interpreting biological data to solve biological questions. Today's biological research generates a huge quantity of data. This is growing exponentially with a shift in emphasis from individual biomolecules, to analysis of how they interact in complex networks which control the developmental and physiological processes of whole biological systems, and research into how this relates to human health. This transition

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has increased the importance of bioinformatics and raises key challenges which make it imperative that computer scientists work closely with biologists to refine existing bioinformatics tools and develop new ones.

4. (10pts) To ensure that hospitals provide the best healthcare for patients, the Bureau of National Health Insurance (BNHI) under Department of Health on July 1 announced the Hospital Quality Healthcare Program, which subsidizes participating hospitals and medical facilities for offering health services to the patients with various illnesses. The services are aimed at ensuring the rights of patients to get healthcare of the highest quality. Under the program, participating hospitals and medical facilities are required to establish a service center for patients; provide treatment for rare disorders, AIDS and other severe illnesses; provide a hotline for patients to make complaints or raise questions or issues they might have.

5. (10pts) Influenza is caused by the flu virus, which has three types — A, B and C — with types A and B being more virulent. The type A virus caused a pandemic decades ago that wiped out a significant portion of the population in Europe, while type B can also cause epidemics threatening those living in communities. The type A virus is further broken down into two subtypes — H and N — that can form a variety of combinations. The most common ones are the H1, H2 and H3 viruses, which cause the common flu spread among humans by droplets of saliva coming out of an infected individual. The H5N1 virus, commonly known as the bird flu, has already killed dozens. In 1997, an epidemic broke out in Hong Kong, infecting 18 and killing six of them. In the beginning of this year, a similar epidemic broke out in Vietnam and Thailand, infecting 34 and killing 23.

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三、(30 pts) 英文作文 (以 300 字為限，寫一篇英文短文)。『21 世紀已經被認為是生物技術的世紀』，但是生物技術產業並沒有如預期的一帆風順，投資界對生物技術的態度經常是忽冷忽熱。據英國《經濟學家》雜誌分析，一般人對生物技術產業的懷疑，主要原因是將短期的問題與長期的潛力混為一談...

個人基於對生物科技 (包括生物醫學/醫學工程/生物資訊) 的興趣報考暨大生醫科技研究所，文中請闡述個人對於台灣未來的生技發展應如何突顯優勢，推動台灣成為東亞生技島，更進一步進軍國際生技市場所該有的想法及作法。

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