

國立暨南國際大學九十三年學年度碩士班研究生入學考試試題

第 1 節科技英文 適用:(生醫所生醫組 531 生醫所醫工組 541 )

(本試題共 3 頁,第 1 頁)

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,並限以藍黑色筆作答。

3. 試題隨卷繳回。(餘詳詳閱試場規則)

一、是非題 True/False Test (34% , 每小題 2% )

- \_\_\_\_\_ 1. Integrate and segregate are antonyms.
- \_\_\_\_\_ 2. When you pay attention to something, you do not need to concentrate.
- \_\_\_\_\_ 3. A naïve person is sophisticated.
- \_\_\_\_\_ 4. A biography would be fictitious.
- \_\_\_\_\_ 5. When you frustrate someone, you stop him/her from doing something he/she wants to do.
- \_\_\_\_\_ 6. Optimist and pessimist are antonyms.
- \_\_\_\_\_ 7. Your credentials are what you have that makes persons believe you can do a certain job.
- \_\_\_\_\_ 8. A sentimental person would be apathetic.
- \_\_\_\_\_ 9. When you have an alternative, you have no choice.
- \_\_\_\_\_ 10. A proposal is something you must accept.
- \_\_\_\_\_ 11. When you are ambiguous, what you say can be taken two ways.
- \_\_\_\_\_ 12. Equivalent and similar are synonyms.
- \_\_\_\_\_ 13. An egocentric person is concerned with himself or herself.
- \_\_\_\_\_ 14. All intermissions are at least ten minutes.
- \_\_\_\_\_ 15. A pacifist is belligerent.
- \_\_\_\_\_ 16. The legislature is responsible for making laws for the state or federal government.
- \_\_\_\_\_ 17. In the word mankind, man is used in the generic sense because it refers to both men and women.

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第 1 節科技英文 適用：(生醫所生醫組 531 生醫所醫工組 541)

(本試題共 3 頁，第 2 頁)

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二、選擇題 Directions: A list of definitions follows. In the space provided, insert the letter for the word that best fits the definition (14% , 每11題2%)

- \_\_\_\_\_ 18. An extreme fear (a) biology (b) biped (c) phobia (d) pedestrian
- \_\_\_\_\_ 19. Something consisting of opposing parts (a) unique (b) unison (c) contradiction  
(d) uniform
- \_\_\_\_\_ 20. Message from a distance (a) telegraph (b) telegram (c) telescope (d) autograph
- \_\_\_\_\_ 21. One who views something (a) spectator (b) spectacle (c) spectacular (d) script
- \_\_\_\_\_ 22. The science of life (a) geology (b) geography (c) biography (d) biology
- \_\_\_\_\_ 23. Manner of speaking (a) fictionary (b) dictation (c) diction (d) dictator
- \_\_\_\_\_ 24. Unison (a) a saying of something together (b) study of words (c) similar  
(d) all

三、請細讀以下 4 段文章，並將各段文章分別整理為成 100 字內的中文短文 (32% , 每小題 8%)

- For a large portion of the world, particularly sub-Saharan Africa, the buzz of mosquitoes carries with it the threat of malaria. The disease, caused by the *plasmodium* parasite, infects hundreds of millions of people annually and kills nearly a million. Anti-malarial drugs can prevent the disease from becoming fatal, but parasites can grow resistant to their effects. "Many researchers focus on the direct effects of *plasmodium* on the human body but the mosquito is an equally important battleground in fighting the disease," notes Fotis C. Kafatos of the European Molecular Biology Laboratory. In a report published today in the journal *Science*, his team describes three genes that could help scientists employ the insect own immune system to stop malaria spread. [Scientific American, March 26 2004]
- Bats, along with other animals that employ echolocation, rely on their ears more than their eyes for orientation and navigation. The creatures send out signals and then listen to the echo bouncing off an item. But just how the animals analyzed a spate of echoes coming off the same object, such as a leafy tree, has eluded scientists. New research suggests that bats are skilled statisticians. They appear to perform a type of statistical analysis on the sum of all the acoustical reflections in order to make sense of their complex surroundings. [Scientific American, March 30 2004]
- Elemental silicon has the same structure as diamond, as might be expected from its position in the periodic table (in Group 4A directly under carbon). Recall that in diamond there is a large energy gap between the filled and empty molecular orbitals. This gap prevents excitation of electrons to the empty molecular orbitals (conduction bands) and makes diamond an insulator. In silicon the situation is similar, but the energy gap is smaller. A few electrons can cross the gap at

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第 I 節科技英文 適用：(生醫所生醫組 531 生醫所醫工組 541)

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room temperature, making silicon a semiconducting element, or semiconductor. [Zumdahl Chemistry, 5<sup>th</sup> edition]

4. Most important applications of semiconductors involve connection of a p-type and an n-type to form a p-n junction. At the junction, a small number of electrons migrate from the n-type region into the p-type region, where there are vacancies in the low-energy molecular orbitals. The effect of these migrations is to place a negative charge on the p-type region (since it now has a surplus of electrons) and a positive charge on the n-type region (since it has lost electrons, leaving holes in its low-energy molecular orbitals). This charge buildup, called the contact potential, or junction potential, prevents further migration of electrons. [Zumdahl Chemistry, 5<sup>th</sup> edition]

四、英文作文 (以 250 字為限，寫一篇英文短文。文中說明個人對生物醫學/醫學工程/生物資訊感到興趣而報考暨大生醫科技研究所的原因 (20%))

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