

國 立 清 華 大 學 命 題 紙

97 學年度 動力機機工程學系戊組 (光機電及生醫系統組) 碩士班入學考試

科目 科技英文 科目代碼 1302 共 4 頁第 1 頁 *請在【答案卷卡】內作答

Enter your answers on the Answer Sheet

Part 1. Grammar Rules and Vocabulary (2 points each)

1. 王建民 is _____ MLB player. _____ tall.
 - a. a a. six feet
 - b. an b. six foots
 - c. the c. six-feet
 - d. (blank) d. six-foot

2. Which statement is correct?
 - a. The English is an interesting subject.
 - b. English is an interested subject.
 - c. The English is interesting a subject.
 - d. English is an interesting subject.

3. A typical trajectory of a projectile is a(n):
 - a. parabola
 - b. ellipse
 - c. hyperbola
 - d. exponential

4. When a bus slows down, the passengers tend to lean forward because they experience:
 - a. impulse
 - b. harmonic movement
 - c. deceleration
 - d. impact

5. Most basketball players are at least

6. The professor had once taught _____ Natl. Tsing-Hua University
 - a. in
 - b. at
 - c. over
 - d. within

7. I have never expected so much from the competition as _____.
 - a. he does
 - b. he had
 - c. he is
 - d. he has

8. I am totally frustrated; I wish my project _____ go more smoothly.
 - a. can
 - b. will
 - c. could
 - d. does

9. He is the man _____ dog came and ate the food.
- which
 - whose
 - that
 - its

10. Although he told me to go to his house yesterday, _____.
- but I still forgot
 - I still forgot
 - but I have still forgot
 - I have ever forgot

Part 2. Reading Comprehension (3 points each)

Article A:

Rising prices for cooking oil are forcing residents of Asia's largest slum, in Mumbai, India, to ration every drop. Bakeries in the United States are fretting over higher shortening costs. And here in Malaysia, brand-new factories built to convert vegetable oil into diesel sit idle, their owners unable to afford the raw material. This is the other oil shock. From India to Indiana, shortages and soaring prices for palm oil, soybean oil and many other types of vegetable oils are the latest, most striking example of a developing global problem: costly food.

- The "original" oil shock is
 - poor people getting more poor
 - cooking oil not enough
 - diesel engine becoming cheaper
 - high gasoline price
- Food becomes more expensive in India because:
 - India is a poor country
 - India has no oil
 - oil companies are on strike
 - vegetable oil becomes scarce
- According to the article, which food item in America became more expensive?
 - Coca cola
 - coffee
 - bread
 - salads
- Why do the brand-new factories in Malaysia sit idle?
 - Oil is too expensive.
 - Cooking oil is too expensive.
 - Soy beans are too expensive.
 - People are too poor to pay for gasoline.
- What is the key point of the article?
 - Poor people in poor countries are getting poorer.
 - Vegetable oils are getting expensive because of global warming.
 - You must ration food in the slums.
 - Food price is higher because many food items are used to make diesel.

Article B

The scientific method seeks to explain the events of nature in a reproducible way, and to use these reproductions to make useful predictions. It is done through observation of natural phenomena, and/or through experimentation that tries to simulate natural events under controlled conditions. It provides an objective process to find solutions to problems in a number of scientific and technological fields. Often scientists have a preference for one outcome over another, and scientists are conscientious that it is important that this preference does not bias their interpretation. A strict following of the scientific method attempts to minimize the influence of a scientist's bias on the outcome of an experiment. This can be achieved by correct experimental design, and a thorough peer review of the experimental results as well as conclusions of a study.

6. A scientist _____ have a preference for a research outcome.
- a. can
 - b. must
 - c. does not
 - d. should
7. How to minimize a scientist bias?
- a. Simulating natural events under controlled conditions
 - b. Repeating the experiment
 - c. Making useful predictions
 - d. Solid peer review
8. The scientific method is a(n):
- a. controlled process
 - b. objective process
 - c. predicable process
 - d. subjective process
9. A good science must be:
- a. experimental
 - b. natural
 - c. reproducible
 - d. technological
10. Which of the following is a controlled condition?
- a. sound levels in a movie theater
 - b. wind speed on campus
 - c. Internet traffic
 - d. temperature in a refrigerator

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Part 3. Translation: Translate the following Chinese sentence(s) into English sentence(s) (10 points each)

- 3.1 老實說, 我從來都沒喜歡過物理實驗。
- 3.2 對我來說, 英文不只是一門課, 它是進入世界的鑰匙。
- 3.3 這不是昨天下午我借給你的桌上型電腦。
- 3.4 9 的平方根乘 5 等於 15。

Part 4. Writing Ability (10 points)

Given four 50 cm (L)x 20 cm (W) x 1 cm (T) pre-cut lumber (wooden) pieces, eight nails, and a hammer, write a short instruction on how to put together a simple square box.