

國立清華大學命題紙

98 學年度系 動力機械(所) 戊 組碩士班入學考試

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

Enter your answers on the Answer Sheet

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Part 1. Grammar Rules and Vocabulary (30 points, 3 points each)

1. France is \_\_\_\_\_ European country.
  - a. a
  - b. an
  - c. the
  - d. (blank)
2. Which statement is correct?
  - a. The Fluid Dynamics is an interesting subject.
  - b. Fluid Dynamics is an interested subject.
  - c. Fluid Dynamics interests a subject.
  - d. Fluid Dynamics is an interesting subject.
3. A typical example of acceleration is:
  - a. fishing from a boat
  - b. humidity changing
  - c. bubble bursting
  - d. none of the above
4. Rainbow is from light \_\_\_\_\_.
  - a. diffractions
  - b. refractions
  - c. deflations
  - d. impactions
5. He is the tallest man \_\_\_\_\_.
  - a. between us.
  - b. in us.
  - c. than us.
  - d. among us.
6. A non-professional is called an:
  - a. athlete
  - b. amateur
  - c. AIDS
  - d. adult
7. I have never seen so many people take the examination, have you?
  - a. Yes, I never.
  - b. Yes, I did.
  - c. No, I have ever.
  - d. No, I have not.
8. Even if I \_\_\_\_\_ Superman, I still could not help you.
  - a. am
  - b. have been
  - c. like
  - d. were

9. A man \_\_\_\_\_ reputation is questionable should not be given the job.
- which
  - whose
  - his
  - that

10. Not only he \_\_\_\_\_ his brother went on to the trip.
- and
  - still
  - but also
  - plus

Part 2. Reading Comprehension (total 30 points, 3 points each)

Article A:

Global surface temperature increased  $0.74 \pm 0.18^{\circ}\text{C}$  during the 100 years. The Intergovernmental Panel on Climate Change (IPCC) concludes that most of the temperature increases since the mid-twentieth century is "very likely" due to the increase in greenhouse gas concentrations. Natural phenomena such as solar variation and volcanoes probably had a small warming effect from pre-industrial times to 1950 and a small cooling effect from 1950 onward. These basic conclusions have been endorsed by at least 30 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. While individual scientists have voiced disagreement with these findings, the overwhelming majority of scientists working on climate change agree with the IPCC's main conclusions.

Climate model projections indicate that global surface temperature will likely rise a further 1.1 to  $6.4^{\circ}\text{C}$  during the twenty-first century. The uncertainty in this estimate arises from use of differing estimates of future greenhouse gas emissions and from use of models with differing climate sensitivity. Another uncertainty is how warming and related changes will vary from region to region around the globe. Although most studies focus on the period up to 2100, warming is expected to continue for more than a thousand years even if greenhouse gas levels are stabilized. This results from the large heat capacity of the oceans.

1. Scientists are \_\_\_\_\_ that greenhouse gas is the main cause for global warming.
- very sure
  - not all very sure
  - not saying
  - focusing

2. According to the article, if we keep the greenhouse gas level constant from now, would warming continue?
- No, warming will stop.
  - Earth will get colder.
  - Yes, for a long time.
  - Not if we plan more trees.

3. Has the global temperature kept rising since the Industrial Revolution?
- Yes.
  - No.
  - Don't know.
  - More studies are needed.
4. Global warming model parameters include:
- volcano eruptions.
  - Solar variations.
  - types of greenhouse gases.
  - IPCC recommendations.
5. According to the article,
- poor countries disagree about the global warming conclusions.
  - every scientist agrees about the global warming conclusions.
  - solar energy affects the global warming conclusions.
  - some scientists disagree about the global warming conclusions.

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#### Article B

The *concept* of engineering has existed since ancient times as humans devised fundamental inventions such as the pulley, lever, and wheel. Each of these inventions is consistent with the modern definition of engineering, exploiting basic mechanical principles to develop useful tools and objects.

The term *engineering* itself is derived from the word *engineer*, which means "one who operates an *engine*", and "engine" was normally referred to a military machine.

Later, as the design of civilian structures such as bridges and buildings matured as a technical discipline, the term civil engineering was invented to distinguish between those specializing in the construction of such non-military projects and those involved in the older discipline of military engineering (the original meaning of the word "engineering," now largely obsolete, with notable exceptions that have survived to the present day such as military engineering corps, *e.g.*, the U.S. Army Corps of Engineers).

6. The original concept of "engineering" applied to primarily
- civil engineering
  - military applications
  - bridges, tools
  - US Army Corps of Engineers
7. The term "Engineer" came from:
- "constructor of civilian tools and objects"
  - "the invention of car engines"
  - "operator of military machines"
  - "non-military projects"

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8. Engineering activities began:

- a. with pulleys
- b. with the first bridge
- c. first human invention
- d. long time ago

10. Among the fundamental engineering inventions are:

9. The U. S. Army Corps of Engineers is

- a. obsolete
- b. a non-military organization
- c. an ancient engineering company
- d. doing civil engineering

- a. wheels and pulleys
- b. bridges
- c. Internet traffic
- d. discipline exceptions

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Part 3. Chinese-English Translation

Translate the following Chinese sentences into English (total 40 points, 10 points each)

- 3.1. 那個電腦的顏色跟我的電腦不完全相同。
- 3.2. 我從未考慮過要解這微分方程式所需要的知識。
- 3.3. 這就是她昨天說老師要找的網頁。
- 3.4. 現代網路上有資料比以前整個圖書館都要多。