

※ 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。

1. Fill in any appropriate tense (25%)

Pay attention to adverbial time phrases, and be careful of your spelling.

[text is from **Understanding and Using English Grammar: Workbook**, by B. S. Azar, 2nd edition]

Almost every part of the world (1) has experienced (experience) an earthquake in recent years, and almost every part of the world (2) _____ (experience) earthquakes in the years to come. Since the ancient Chinese (3) _____ (begin) to keep records several thousands of years ago, more than 13 million earthquakes (4) _____ (occur) worldwide by some estimates. What (5) _____ (cause) earthquakes? Throughout time, different cultures (6) _____ (develop) myths to explain these violent earth movements.

According to a Japanese myth, a playful catfish lives in the mud under the earth. Whenever it feels like playing, it (7) _____ (wave) its fat tail around in the mud. The result? Earthquakes. From India comes the story of six strong elephants who (8) _____ (hold) up the earth on their heads.

Whenever one elephant move its head, the earth trembles.

Nowadays, although scientists (9) _____ (know) more about the causes of earthquakes, they still can't prevent the terrible damage. One of the strongest quakes in this century (10) _____ (happen) in Anchorage, Alaska, on March 24, 1964, at about six o'clock in the evening. When the earthquake (11) _____ (strike) that evening, many families (12) _____ (sit) down to eat dinner. People in the city (13) _____ (find, suddenly) themselves in the dark because most of the lights in the city went out when the earthquake occurred. Many people (14) _____ (die) instantly when tall buildings (15) _____ (collapse) and (16) _____ (send) tons of brick and concrete into the streets.

When (17) _____ (the next earthquake, occur)? No one really knows for sure. Interestingly enough, throughout history, animals (18) _____ (help, often) people predict earthquakes shortly before they happen. At present, some scientists (19) _____ (study) catfish because catfish swim excitedly just before an earthquake. According to some studies, snakes, monkeys, and rodents (20) _____ (appear, also) to be sensitive to the approach of violent movement in the earth's surface. Some animals (21) _____ (seem) to know a great deal more than humans about when an earthquake (22) _____ (occur).

In recent years, scientists (23) _____ (develop) many extremely sensitive instruments. Perhaps someday the instruments (24) _____ (be) able to give us a sufficiently early warning so that we can (25) _____ (wait) calmly in a safe place when the next earthquake (26) _____ (strike).

2. 請將第一題的文章翻譯成中文。(40%)

3. Please write a short article in English giving an example to clearly explain the Scientific Method. (35%)

「科學方法(Scientific Method)就是觀察新現象，得到新理論或修正舊理論的系統技術。因為所使用的方法必須具備科學精神，因此，必須遵循以下步驟，形成迭代(iteration)或遞歸(recursion)，直到所有的理論與實驗盡量符合，達成一致：

1. 仔細觀察，發現現象：

過去以往的定義是利用感官去查知、覺察自然界的種種現象，但因為感官的主觀性，使得這項定義逐漸被揚棄。現在，大多改為可以經由實驗操作而測量(measure)到某已知或未知的物理量，亦即物理量必須是可被測量的。

2. 形成理論，解釋現象：

所有觀察的現象，都必須被既有的理論所解釋，如果既有的理論無法解釋，至少要提出假說(hypotheses)或學說——一套新的理論——來解釋這種現象。

3. 推論：

根據以上所形成的理論，詳加比較、歸納、演繹，進而可以得到新的現象預測。

4. 實驗驗證：

重新設計不同實驗，重複上述步驟，如果還不能使實驗結果與理論預測符合，則必須再重複，如果兩相符合，則可形成結論。」(出處：<http://highscope.ch.ntu.edu.tw/wordpress/?p=19057>)