

## 長文 4 択問題の解法 ( 1 )

### □ 数字に関する情報処理

◆ 次の英文を読んで、設問の解答として最も適当なものを、(A)～(D)の中から選びなさい。(222 words)

【1998 早大・人科】

According to astronomers, the development of the solar system is not necessarily unique. It follows that there might be other planets that house intelligent civilizations. To estimate the possible number of other human civilizations requires assessing a variety of factors that contribute to their likelihood. An equation used to make this estimate is the *Drake Equation*.

If use of this equation is restricted to just this galaxy, the Milky Way, a starting point is the number of stars formed per year. Because there are 200 billion stars in the Milky Way and this galaxy's lifetime is about 10 billion years, the average is about 20 stars per year. Other factors include the fraction of stars that provide conditions suitable for life to develop on planets, the fraction of such stars with planets, the fraction of planets on which life actually develops, the fraction of life that is intelligent, the fraction of intelligent life that is communicative, and the lifetime of communicative civilizations.

Depending on the values given each of the estimates, numbers from one to several hundred million possible civilizations in the Milky Way have been calculated, with an average of around one million. In the hope of detecting communications from such civilizations, the electromagnetic spectrum reaching Earth is being scanned at various frequencies to look for signs of life. Stay tuned.

<問題>

1. How many stars, like the sun, are there in this galaxy?
  - (A) Less than 10 million
  - (B) Between 10 million and 100 million
  - (C) Between 1 billion and 10 billion
  - (D) More than 10 billion
  
2. On average, how many planets with communicative civilizations may there be in this galaxy?
  - (A) Less than 10 million
  - (B) Between 10 million and 100 million
  - (C) Between 100 million and 10 billion
  - (D) More than 10 billion
  
3. Why is the electromagnetic spectrum important?
  - (A) To send visual messages from the Earth
  - (B) To find out the lifetime of stars
  - (C) To obtain evidence of intelligent life
  - (D) To develop communications devices

<解法：Scanning ⇒ 消去法> 数字表記（算用数字・英語）に注意！

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\*detect:探知する

\*electromagnetic:電磁気の

\*spectrum:スペクトル

\*frequency:周波数