[　英　語　]　（全５題）

（注意）解答は問題ごとに別の解答用紙を用いること．

次の [問題１] および [問題２] の英文を和訳せよ．

[問題１]

Modern explanations of the chemical properties of matter are based on well tested concepts of the atom and molecules. All matter is presumed to consist of exceedingly small fundamental particles (atoms), which retain their identity in all chemical changes. Atoms may form relatively stable combinations with one another (molecules), and chemical changes or reactions involve changes in these molecules. An important part of chemistry, then, is concerned with the questions "Which combinations of atoms are more stable?", "What are the circumstances required for their stability?", and "What conditions make possible the change of one kind of atomic combination into another?" In other words, we ask about the identity, the stability, and the reactivity of molecules.

[問題２]

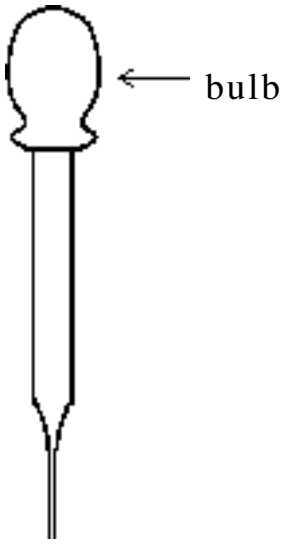
Since the invention of the laser in 1960, a steadily increasing number of applications has been found for this remarkable device. At first it appeared strangely difficult to find any obvious applications. The unusual properties of laser light were all too obvious, and yet it was not clear how they could be put to practical use. More and more applications were discovered as the years passed, however, and this attitude slowly changed until by the end of the 1970's there was scarcely an area of science and technology in which lasers had not been found application for one purpose or another. Today, lasers are utilized for such diverse purposes as aiming missiles and for eye surgery; for monitoring pollution and for checking out goods at supermarkets; for welding and for light-show entertainment. Even within the field of specifically chemical applications, the range extends from the detection of atoms at one end of the scale to the synthesis of vitamin D at the other.

次の [問題３] および [問題４] の文章を英訳せよ．

[問題３]

実験研究では，用いた実験手段の観測の時間スケールを十分に考慮して，得られた結果を議論することが重要である．もし，調べたい現象の寿命よりも観測時間が十分に短いなら，その現象の瞬間瞬間の経時変化を調べることができるが，観測時間が大変遅い場合には，その現象の時間平均しか見ることができない．

[問題４]

発見とは，誰もが見てきたことを見て誰も考えなかったことを考えることから成る．予期したものだけを見て予期せぬ結果を「誤り」として捨てる人は何の発見もしないだろう．

[問題５] スポイト（Pasteurpipette: 右図参照）を用いて少量の液体を移す操作を５０～１００語の英語で説明せよ．