Examination

20 min

次の英文を読んで，後の設問に答えなさい。

The universe is in a perpetual state of change. The stars are in constant motion, growing, cooling, exploding. The earth itself is not unchanging; mountains are being worn away, rivers are altering their channels, valleys are deepening. All life is also a process of change, through birth, growth, decay, and death. Even what we used to call “inert matter” — chairs and tables and stones — is not inert, as we now know, for, at the submicroscopic level, they are whirls of electrons and protons. (a)If a table looks today very much as it did yesterday or as it did a hundred years ago, it is not because it has not changed, but because the changes have been too minute for our coarse perceptions.

To modern science, there is no “solid matter.” If matter looks “solid” to us, it does so only because its motion is too rapid or too minute to be felt. It is solid only in the sense that a rapidly rotating color chart is “white” or a rapidly spinning top is “standing still.” Our senses are extremely limited, so that we constantly have to use instruments such as microscopes, telescopes and speedometers to detect and record occurrences that our senses are not able to record directly. The way (b)[happen, in, see, to, we, which] and feel things is the result of the peculiarities of our nervous system. There are “sights” we cannot see, and, as even children know today with their high-frequency dog whistles, “sounds” that we cannot hear (c)It is absurd, therefore, to imagine that we ever perceive

anything “as it really is.”

(d)[are, as, inadequate, our, senses], with the help of instruments they tell us a great deal. The discovery of microorganisms with the use of the microscope has given us a measure of control over bacteria; we cannot see, hear, or feel radio waves, but we can create and transform them to useful purpose. Most of our conquest of the external world, in engineering, in chemistry, and in medicine, is due to our use of mechanical contrivances of one kind or another to increase the capacity of our nervous systems. (e)In modern life, our unaided senses are not half enough to get us about in the world. We cannot even obey speed laws or compute our gas and electric bills without mechanical aids to perception.

設問(1)　本文中の下線部(a)の内容を日本語で説明しなさい。

設問(2)　本文中(b)の[　　]内に示された語群を，最も適当な語順に並べかえ，解答欄に記入しなさい。

設問(3)　本文中の下線部(c)の意味を日本語で表しなさい。

設問(4)　本文中(d)の[　　]内に示された語群を，最も適当な語順に並べかえ，解答欄に記入しなさい。文頭に来る語は大文字にしなくてもよい。

設問(5)　本文中の下線部(e)の内容を日本語で説明しなさい。

設問(6)　本文の内容にあわないものを次の(イ)～(ニ)からひとつ選び，解答欄に記号で答えなさい。

(イ)　顕微鏡などの装置は，世界をより正確に理解するための助けとなる。

(ロ)　万物は微細な成分からなり不安定であるが，法則性は存在する。

(ハ)　技術の進歩によって，われわれは知覚の限界を補ってきた。

(ニ)　万物は流転の状態にあるが，安定しているように見える場合がある。