

2010年职称英语理工类完型填空新增文章(1) PDF转换可能丢失图片或格式，建议阅读原文

https://www.100test.com/kao_ti2020/646/2021_2022_2010_E5_B9_B4_E8_81_8C_c91_646683.htm 第3篇 Seeing Red Means Danger Ahead The color red often means danger - and by paying attention, (1) can be prevented. At railroad crossings, flashing red lights warn cars to stay back. A red light at a traffic intersection tells cars to stop, so (2) don't run into other cars. In the future, the color red also may help prevent danger (3) construction sites. Thanks to new work by engineers, bridge supports² - or other kinds of materials - could one day contain a color-changing material. It will turn red (4) a structure collapses or falls (5) . A tiny molecule may make a big difference in future warning systems. A polymer (6) a color-changing molecule called a mechanophore turns red seconds before it snaps³. The technology may one day allow damage to materials or structures⁴ to be easily (7) . The secret behind the color-changing material is a particular type of molecule. A molecule is a group of atoms held together by (8) bonds. Molecules come in all shapes and sizes, and make up (9) you can see, touch or feel. How a molecule behaves depends on what kinds of atoms it contains, and how they're held together. When a polymer containing a color-changing molecule called a mechanophore is about to break, it produces a color. When a polymer with mechanophore molecules becomes "injured" or (10) , one of the mechanophore bonds breaks and the material turns red. "It's a really simple detection method," says Nancy Sottos, one of the scientists who worked on the

project. "Were (11) up this one bond, and it changes color." Sottos and her team tested the color-changing polymers in their lab. The test (12) proved encouraging. There is a way to get rid of~ the red color: (13) . When a bright light is shone on the mechanophore, the broken bond is fixed and the red color disappears. This "self-healing" may be a problem for engineers. They need to use the color-changer in big construction projects that will be (14) , in sunlight. And sunlight will make the mechanophores warning system useless. Sottos and her fellow scientists still have (15) work to do before the color-changing molecules can be used outside the lab.

词汇： crossing n.十字路口 mechanophore n.机械响应性聚合物 intersection n.交叉路口 molecule n.分子 snap v.折断，断裂 polymer n.聚合物 atom n.原子 注释： 本文来源:百考试题网 1.

Thanks to：多亏，由于 2. bridge supports：桥梁支柱 3. seconds before it snaps：聚合物断裂前几秒钟。Seconds 修饰状语从句 before it snaps。It 指代 polymer。 4. damage to materials or structures：材料或建筑物的损坏。to 是介词。介词短语 to materials or structures 修饰 damage。 5. is about to break：即将断裂。be about to (V)意为“刚刚，行将”。 6. get rid of：除去。

7. the broken bond is fixed：断裂的键被修复。Fix 意为“修理，修复”。 练习： 1 A measures B accidents C actions D collapses 2 A they B it C some D most 3 A with B over C at D in 4 A before B after C once D while 5 A together B behind C down D apart 6 A contacting B conducting C containing D considering 7 A controlled B spotted C repaired D changed 8 A technical B electronic C physical D chemical 9 A everything B something C

nothing D anything 10 A weak B strong C tough D soft 11 A using B opening C turning D finishing 12 A laws B theories C tools D results 13 A air B electricity C light D sound 14 A aside B beside C inside D outside 15 A a part of B a pair of C a piece of D a lot of 答案与题解

: 1. B 从第一句的 “ The color often means danger ” 和 “ ...can be prevented ” 所表达的意思判断，accidents 是答案。因为存在 danger,就有可能出现 accidents。因为有了红色预警信号，accidents 就有可能 prevented。 2. A 本题的测试点是代词。代词所要指代的词是 cars，它是复数，所以代词 they 是唯一选择。 3. C construction sites 前面的介词要用 at。with, over 和 in 都不合适。 4. A 这两段说，把一种能变色的化学物质加在建筑材料中，当建筑物断裂之前，变色材料会显示红色。所以，after 与上下文逻辑相悖。用了 once，句意变成 “ 一旦建筑物断裂，变色材料会显示红色 ”，这不合逻辑，断裂后才变色就是去了预警作用。While 也说不通，因为 “ It will turn red while a structure collapses ” 的意思是 “ 在建筑物倒塌期间，变色材料会显示红 ”，断裂后才显示红色已经没有意义了。所以，只有 before 才是答案。 5. D 要选 apart。fall apart 意为 “ 破碎，破裂 ”。Collapses or falls apart 中的 or 意为 “ 即 ”，所以，fall apart 与 collapse 同义。 6. C 从上下文所表达的意思判断，本次要选的词是 containing，即 “ 含有(变色材料的聚合物) ”。其余三个选项，即 contacting(接触)，conducting(进行)，considering(考虑)都与句意搭不上。 7. B 建筑物断裂之前，变色材料会显示红色。这种新技术的预警性很明显，人们见到建筑物出现红色就知道有险情。所以，spotted(发现，认出)是答案。 8. D 本段对变色材料为什么会变色的原理做出

解释，句中出现 atoms, molecule 等。所以 变色是一种化学反应，不会是一种物理、电子或技术反应。9. A 本句的意思是：分子的大小和形状构成世界万物，所以应选 everything(每样东西，即万物)。10. A 本句的意思是：含有 mechanophore 分子的聚合物“受伤”时，mechanophore 中的一个键就会断开，于是它便呈现红色。句中的 or 意为“即”，也就是说，紧接在 or 后面的词应该是 injured 的同义词，所以要选 weak。转自 职称英语考试网 11. B Sottos 和她的研究组进行了实验，断开 mechanophore 的一个键，让其呈现红色。Opening up 是“打开，断开”的意思，与上下文意思相符，所以选 opening 是答案。Using up 来源：考试大的美女编辑们(用完)，turning up(出现)或 finishing up(做完)与 bond 连用，意思都不对。12. D 上文说到，Sottos 和她的研究组进行了实验，所以 test 后面的词应该是 results。最后一个词是 encouraging，也提示了 results 是答案。13. C 本段第二句说，当明亮的光线射到被断开的化学键上，化学键就会被修复，于是红色预警信号就消失了。第二句的 light 提示了第一句缺失的关键词就是 light。14. D 大型建筑物一半均是露天的。句末的 sunlight 提示了要选 sunlight。15. D 红色预警信号在阳光下是不会出现的。所以，如何能使红色预警信号在室外也能显现，这是科学家今后研究的课题，而且研究的难度和工作量还很大。四个选项中，只有 a lot of 与上下文的意思对得上号。A part of(一部分)和 a pair of(一双)明显不合适。A piece of(一件)也不合逻辑。编辑推荐：为帮助广大学员有效备考，我们特推出了职称英语2010年网络辅导课程,相信会让大家有耳目一新的视听感受。2009年职称英语通过率近100%，为答谢数十万用户

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