

2009职称英语考前每日一练(理工类第42期 - B级)职称英语考试 PDF转换可能丢失图片或格式，建议阅读原文

https://www.100test.com/kao_ti2020/562/2021_2022_2009_E8_81_8C_E7_A7_B0_c91_562318.htm 概括大意与完成句子(每题1分

, 共8分) The Tiniest Electric Motor in the World 1 . Scientists recently made public the tiniest electric motor ever built . You could stuff hundreds of them into the period at the end of this sentence . One day a similar engine might power a tiny mechanical doctor that would travel through your body to remove your disease . 把职称英语页面加入收藏 2 . The motor works by shuffling atoms between two molten metal droplets in a carbon nanotube . One droplet is even smaller than the other . When a small electric current is applied to the droplets , atoms slowly get out of the larger droplet and join the smaller one . The small droplet grows but never gets as big as the other droplet and eventually bumps into the large droplet . As they touch , the large droplet rapidly soaks up the atoms it had previously lost . This quick shift in energy produces a power stroke . 3 . The technique exploits the fact that surface tension—the tendency of atoms or molecules to resist separating—becomes more important at small scales . Surface tension is the same thing that allows some insects to walk on water . 4 . Although the amount of energy produced is small—20 microwatts—it is quite impressive in relation to the tiny scale of the motor . The whole setup is less than 200 nanometers on a side . Or hundreds of times smaller than the width of a human hair . If it could be scaled up to the size of an automobile engine , it would

be 1 00 million times more powerful than a Toyota Camry ' s 225 horsepower V6 engine . 5 . In 1988 , Professor Richard Muller and colleagues made the first operating micromotor , which is 100 microns across , or about the thickness of a human hair . In 2003 , Zettl ' s group created the first nanoscale motor . In 2006 , they built a nanoconveyor , which moves tiny particles a 10 ng like cars in a factory . 6 . Nanotechnology engineers try to mimic nature , building things atom-by-atom - Among other things , nanomotors could be used in optical circuits to redirect light , a process called optical switching . Futurists envision a day when nanomachines , powered by nanomotors , travel inside your body to find disease and repair damaged cells .

词汇 : shuffle v . 来回运动
nanometer n . 纳米 , 毫微米
molten adj . 熔化的
micromotor n . 微电机
droplet n . 小滴
nanotube n . 纳米管
Nanoconveyor n . 纳米传送带
nanotechnology n . 纳米技术
bump v . 碰撞
mimic v . 模仿
suck v . 吸入
stroke n . 行程 , 冲程
microwatt n . 微瓦
nanomotor n . 纳米发动机
nanomachine n . 纳米机器

注释 : 1 . Power stroke : 动力行程
2 . at small scales : 在小等级上。这里指的是“在纳米等级上”。
3 . it is quite impressive in relation to the tiny scale of the motor : 与电动机的小等级相比 , 功率是相当可观了。in relation to 是“与.....相比” , 如 : The city is quite large in relation to its population . (就人口而言 , 这个城市相当的大。)
4 . Setup : 装置。这里指 nanomotor。
5 . If it could be scaled up to the size of an automobile engine : 如果纳米电动机能按比例放大到汽车发动机的尺寸。scale...up to 是“把.....按比例放大到.....”。

练习 : 1 . Paragraph 2 2

. Paragraph 4 3-Paragraph 5 4 . Paragraph 6 A An introduction of a Toyota ' s 225 horsepower V6 engine . B A description of the nanomotor in terms of power and size。 C Surface tension . D Previous inventions of nanoscale products . E The working principle of the nanomotor . F Possible fields of application in the future . 5 . Doctors envision that the nanomotor would travel through human bodies to 6 . Surface tension means the tendency of atoms or molecules to 7 . Nanoconveyors could be used . t0 8 . Applying a small electric current causes atoms to A remove disease B resist separating C shuffle between two molten metal droplets D power nanomachines E Soak up molecules from the large droplet F Transport nanoscale objects 1 . E . 段落中有明显的段落主题词droplet(小滴)(该词贯穿全段出现)，但是小标题被选项中没有出现该词，因此推测该主题词可能被隐含中段落小标题中，接下来对该段落采取“z字阅读法”，段首句说“该发动机(指代前段中提到的纳米发动机)通过纳米管中在两滴金属溶液之间来回运动的原子产生运动”，段落中间的句子具体对这两滴金属溶液进行介绍，段落结尾句说“这种能量的快速移动产生动力行程”，由此看出该段是在具体介绍纳米发动机的工作原理。 2 . B . 段落中出现了大量代表典型细节信息的词语：20 microwatts(微瓦)，200 nanometers(纳米)，100 million times，225 horsepower(马力)，这些细节信息贯穿全段，从性质上分别用于描述功率和体积，因此可直接判断B(描述了纳米发动机的功率和体积)是答案。 3 . D . 段落中出现了贯穿全段的时间状语：In 1988，In 2003，In 2006，由此判断很可能该段是在介绍某样东西(很可能与纳米发动

机相关)的发展历史，因此D(发明纳米发动机之前的一些纳米等级的产品)是答案。其实段落中介绍了如体积大一些的纳米发动机，微型发动机，纳米传送带，纳米机器等。4. F. 采用“z字型段落阅读法”：段落段首句说“纳米技术工程师试图...”，段尾句说“预想家们预想有一天...”，段落主题词为“纳米发动机”，由此可见该段是在预想纳米发动机的用途，因此F(在未来的可能用途)是答案。5. A. 题干出现doctors envision，选项的内容应与医学有关，选项A是remove disease，正好与题干的内容相配，是答案。短文第一段和最后一段也提到纳米发动机进入人体消灭病灶的可能性，证明了选A是正确的。6. B. 选B的依据是第三段第一句“surface tensionthe tendency of atoms or molecules to resist separatingbecomes more important at small scales”。7. F. 题干的nanoconveyor提示我们，纳米传送带的功能自然是传送纳米等级的物体，所以，F是答案。8. C. 题干的Applying a small electric current...在第二段能找到，该段讲的是纳米发动机的工作原理。如果了解原子在两小滴金属熔液中来回运动，产生动力，就会知道c是答案。相关链接：2009年职称英语考试考前冲刺复习注意事项 2009年全国职称英语考试临考冲刺三大注意 2009年全国职称英语考试词典携带问题解答 100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com