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https://www.100test.com/kao_ti2020/581/2021_2022_2010_E5_B9_B4_E8_81_8C_c91_581895.htm Listening Device Provides Landslide Early Warning A device that provides early warning of a landslide by monitoring vibrations in soil is being tested by UK researchers. The device could save thousands of lives each year by warning when an area should be evacuated, the scientists say. Such natural disasters are common in countries that experience sudden, heavy rainfall, and can also be triggered by earthquakes and even water erosion. Landslides start when a few particles of soil or rock within a slope start to move, but the early stages can be hard to spot. Following this initial movement, "slopes can become unstable in a matter of hours or minutes," says Nell Dixon at Loughborough University¹, UK. He says a warning system that monitors this movement "might be enough to evacuate a block of flats or clear a road, and save lives." The most common way to monitor a slope for signs of an imminent landslide is to watch for changes in its shape. Surveyors can do this by measuring a site directly, or sensors sunk into boreholes or fixed above ground can be used to monitor the shape of a slope. Slopes can, however, change shape without triggering a landslide, so either method is prone to causing false alarms. Now Dixon's team has developed a device that listens for the vibrations caused when particles begin moving within a slope. The device takes the form of a steel pipe dropped into a borehole in a slope. The borehole is filled in with gravel around the pipe to help

transmit high-frequency vibrations generated by particles within the slope. These vibrations pass up the tube and are picked up by a sensor on the surface. Software analyses the vibration signal to determine whether a landslide may be imminent. The device is currently being tested in a 6-metre-tall artificial clay embankment in Newcastle2 , UK. Early results suggest it should provide fewer false positives than existing systems. Once it has been carefully and thoroughly tested , the device could be used to create a complete early-warning system for dangerous slopes. “ Locations with a significant risk of landslides could definitely benefit from a machine like this, ” says Adam Poulter , an expert at the British Red Cross. “ As long as it doesn ’ t cost too much. ” But , Poulter adds that an early-warning system may not be enough on its own. “ You need to have the human communication, ” he says. “ Making systems that get warnings to those who need them can be difficult. ”

词汇：
landslide/5lAndslaid/n. 山崩.地滑.塌方 imminent/5iminEnt/adj. 即将发生的
vibration/vai5breiFEn/n. 振动 sensor/5sensE(r)/ n. 传感器
evacuate/i5vAkjueit/v. 疏散， 撤走 borehole/5bC:hEul/n. 钻孔， 井眼
rainfall/5reinfC:l /n. 降雨， 降雨量 gravel/5^rAvEl/n. 砾， 沙砾， 砾石
erosion/i5rEuVEn/n. 腐蚀， 侵蚀

embankment/Im5bANkmEnt/n. 堤岸 注释： 1. Loughborough University： 拉夫堡大学。 该大学地处英格兰东部的拉夫堡市， 始建于1909年的拉夫堡学院， 1966年获得皇家特许正式成为综合大学。 2. Newcastle： 纽卡斯尔。 英格兰东北部的一个自治区， 位于利兹(Leeds)以北泰纳(the Tync River)河畔。 练习： 1. What does “ Such natural disasters ” in the first paragraph

refer to? A Sudden , heavy rainfall. B Earthquakes. C Water erosion. D Landslides. 2. Which of the following statements is true of landslides? A The initial movement is hard to spot. B They start with a movement of a few particles of soil or rock. C They can be destructive in a matter of hours or minutes. D All of the above. 3. Why do researchers develop a new device to monitor signs of landslides? A Because the new device can measure the site directly. B Because the new device can be sunk into boreholes or fixed above ground. C Because the common methods can cause false alarms. D Because the common methods are useless. 4. Which of the following statements is NOT true of the device , according to Paragraph 4? A It is filled in with gravel. B It consists of a steel pipe. C It is dropped into a borehole filled in with gravel. D It is connected to a sensor on the surface. 5. According to the context , what does the word “ positives ” in the fifth paragraph mean? A Positive electric charges. B Evidences. C Warnings. D Predictions. 答案与题解： 1. D 短文第一段的第一句告诉我们，英国研究人员正在测试一种仪器，这种仪器可以通过监测土壤的振动来预警山崩。该段最后一句说，这种灾难经常在一些遭受自然灾害的国家发生，这些自然灾害包括sudden , heavy rainfall和earthquakes以及water erosion。所以D是正确选择。 2. D A、 B、 C的内容都可在第二段中找到。所以D是正确答案。 3. C 第三段的第一和第二句告诉我们，最为普通的监测山崩方法是对山坡形状变化的观察，有两种观察方式.第三句说，因为山坡形状的变化不一定导致山崩，所以两种方法都会有虚假的预警。因此，C是正确答案。 4. A B、 C、 D所述内容都可在第四段中找

到。The borehole is filled in with gravel around the pipe.在被凿出的洞里填充沙砾，围在钢管四周。不是在钢管里填充沙砾。所以A是错误的说法，是正确的选择。5. B positives在此用作名词，意思是：被证实的因素或特点，可以理解为证据。相关推荐：把职称英语页面加入收藏 2009年职称英语考试成绩查询汇总 2009年职称英语考试试题及答案点评专题 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。现在报名职称英语辅导，赠送2009年精品课程及考试E币。点击查看详情》 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