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https://www.100test.com/kao_ti2020/110/2021_2022_2005_E5_B9_B4MPA_c74_110370.htm Passage ThreeIn early 2004 eight tiny sensors were 0dropped from a plane near a military base in California. After hitting the ground, the sensorsalso known as smart dust sensorsorganized themselves into a network and quickly detected a fleet of military vehicles on the ground. The determined the direction, speed and size of a series of military vehicles traveling along the road and later transmitted the data to a computer at a nearby base camp.Smart dust sensors are minicomputersas small as a grain of rice in some casesthat can monitor and evaluate their physical environment and can relay the information via wireless communication. They can monitor elements such as temperature, moisture, humidity, pressure, energy use, vibration, light, motion, radiation, gas, and chemicals. These devices will soon have many applications, such as use in emergency rescue.Software has been developed to run these minicomputers. A key feature of the software is the ability of the sensors to automatically organize themselves into a communications network and talk to each other via wireless radio signals. If any one connection is interrupted, the sensors will self-correct and pass the information on to the next available sensor.Each sensor has a chip that does the computing workrecording things like temperature and motion at its location. Each sensor also has a tiny radio transmitter that allows it to talk to other sensors within 100 feet or so. With a single network of 10,000

sensorsthought to be the biggest array (阵列) of sensors currently possibleyou could cover 9 square miles and get information about each point along the way. The data finally works its way to a base station that can send the information to a computer or to a wireless network.The scientists who are working with this technology say smart dust sensors can be used to detect the location or movement of enemy troops in areas too dangerous or remote for soldiers to operate. Scattering hundreds of self-networking sensors from a manned or unmanned plane onto the battlefield, in theory, could produce critical information and lead to strategic advantage. Sensors could also be used to detect the presence of chemical weapons and could give troops the time needed to put on protective gear.41. Smart dust sensors can do all the following EXCEPT _____.A. giving troops their protective gearB. organizing themselves into a computer networkC. detecting the movement of military vehicles nearbyD. operating in remote and dangerous war zones42. By “ physical environment ” (Paragraph 2), the writer means such elements as _____.A. the position of military troops B. the presence of minicomputersC. the strength of radio signals D. the amount of water vapor in the air43. If connection between two sensors is blocked, the network will automatically _____.A. replace the sensor involved B. repair the sensor involvedC. ignore the sensor involved D. destroy the sensor involved44. To cover an area of 3 square miles and get information about each point along the way, how many smart dust sensors are needed?A. About 3,000 sensors. B. About 3,300 sensors.C. About 5,000 sensors. D. About 6,600 sensors.45.

The passage implies that the smart dust sensors are most likely to be used in _____.A. emergency rescue B. monitoring pollutionC. military operations D. evaluating the environment 