

大学英语四级模拟试卷第11组（阅读3）PDF转换可能丢失图片或格式，建议阅读原文

https://www.100test.com/kao_ti2020/122/2021_2022__E5_A4_A7_E5_AD_A6_E8_8B_B1_E8_c83_122038.htm Passage Three

Questions 31 to 35 are based on the following passage. In a world that is becoming more and more interdependent, there is an ever-increasing need to link communications systems on various continents and to provide live international television coverage. This need is now being met by the communications satellites. Communications satellites make use of technology that has been available for some time: the microwave radio relay. Microwave, which have a higher frequency than ordinary radio waves, are used routinely in sending thousands of telephone calls and television programs across long distances. They give high-quality performance, and they can carry many messages at the same time. But they have always been one problem in using radio relay in overseas communications. Although high-frequency waves can travel almost unlimited distances, they travel only in straight lines. Since the curvature of the earth limits a microwave's line-of-sight path to about 30 miles, good reception requires a series of relay towers spaced every 30 miles or so. Obviously it isn't possible to build these towers across the ocean. But by sending signals high up into the sky and then bouncing them back again to a far-off spot, we can send microwave messages long distances. As long ago as 1945, Arthur C. Clarke, an English science-fiction writer, proposed that manned "stationary" satellites be used to relay and broadcast

electromagnetic communication signals. In 1945, of course, the idea of getting a satellite out into space seemed fantastic. But with ten years, satellites were close to reality. With the first launching of a satellite into orbit by the Soviet Union (Sputnik I) in 1957, the real development work on satellite communications began. Shortly thereafter, two successful satellites were launched in the United States, Echo I and Telstar I. The launching of the Telstar I satellite in 1962 marked a major step toward opening the era of commercial satellite communications. Echo I, a ten-story aluminum-coated balloon, was a “ passive ” target. It merely reflected weak signals back to the earth. But Telstar I was the first “ active ” satellite to pick up a broadband signal, amplify it, and transmit it back to the earth on a different frequency. The satellite ’ s transmission of transatlantic television thrilled millions. A few months after Telstar I went into orbit, Relay, a medium-altitude satellite launched by the National Aeronautics and Space Administration (NASA), provided the first satellite communication between North and South America. Relay was followed by the Telstar II satellite, and by NASA ’ s Syncom series and its successors—all of them high-altitude (23,000 miles) satellites whose orbits are synchronous with the rotation of the earth so that their positions, if they could be seen from the earth, would appear to be fixed in one spot. Shortly before Telstar I was launched, the United States Congress established the Communications Satellite Corporation (Comsat) to develop a commercial satellite system as part of an improved global communications network. Comsat, which is owned partly by public

investors and partly by communications carriers, represents the United States in the International Telecommunications Satellite Consortium-Intelsat-and acts as manager for that body. Since its inception in 1962, the corporation, in collaboration with Intelsat, has inaugurated commercial satellite transmission of telephone, television, and other telecommunications traffic between North America and Europe and North America and the Far East. The commercial satellite Intelsat IV was launched in June of 1972. This one-and-one-half-ton spacecraft multiplied by five times the space-borne relaying capacity linking Africa, Europe, Asia, and Australia. With the launching of Intelsat IV, full global coverage by communications satellites had at last been achieved.³¹ The first paragraph indicates _____. A) communications systems is becoming more and more independent

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