

國立屏東科技大學 九十三年 學年度 碩士班暨碩士在職專班 招生考試  
熱帶農業暨國際合作研究所碩士在職台東專班  
專業科目（二）專業英文 試題

---

翻譯（第一題 40 分、第二題 30 分、第三題 30 分）

1. The ultimate source of energy of all ecosystem is the sun. Solar energy is transformed into chemical energy by the process of photosynthesis in green plants. The chemical energy of the plant tissues is then utilized by organisms and their tissues in turn by others until all the energy is finally dissipated as heat. About half of the sun's energy converted by plants flows through a chain-like sequence of animal groups called an herbivore food chain, and the remainder flows through a less structured mixture of scavengers and decomposers that collectively form the detritus food chain. Whereas the flow of energy through ecosystems is unidirectional, the flow of essential nutrients, the supplies of which are finite, is cyclical.
2. The transition from hunting and gathering to organized agriculture occurred independently in several centers or world regions. Granocultural systems, centered on the cultivation of grains and seed crops, have three major centers of origin in subtropical and temperate regions. Vegicultural systems, which cultivate starchy tubers, originated in the three main areas of the world tropics. In a few areas, agriculture neither evolved nor entered by cultural diffusion.
3. Most of the world's food supply is produced by agricultural systems that are either biologically or technologically more intensive than the subsistence farming systems engaged in by some of the world's people. Highly managed agroecosystems, although they operate according to the same natural laws, as natural ecosystems, are strikingly different in structure and function.