

國立嘉義大學 99 學年度

生物資源學系碩士班(乙組)招生考試試題

科目：專業英文

請將下列英文翻譯成中文

1. Locusts can form huge swarms that turn into devastating plagues of biblical dimensions – that’s the image we remember from horror films or from politicians’ attacks on the practices of aggressive speculators. It’s only when locusts are threatened because space is short or food becomes scarce that they swarm and migrate in search of new habitats and sources of food. When not migrating, the insects keep apart. A flick of their long back legs ensures the required distance is kept from their neighbours, with chirps signalling the search for potential mates. (25 分)
2. The pest management tactic involving purposeful natural enemy manipulation to obtain a reduction in a pest’s status is called biological control or biocontrol. Biological control differs from natural control in that the latter may involve agents other than natural enemies, for example, weather or food, and no purposeful manipulation is involved. Some authorities broaden biological control to include all methods that involve living organisms as part of the tactic, like host plant resistance, sterile insect releases, and genetic manipulation. (25 分)
3. Pathogenic microorganisms, that is, the biotic agents generally referred to as pathogens, usually cause disease in plants by disturbing the metabolism of plant cells through enzymes, toxins, growth regulators, and other substances they secrete, and by absorbing foodstuffs from the host cells for their own use. Some pathogens may also cause disease by growing and multiplying in the xylem or phloem vessels of plants and, thereby, blocking the upward transportation of water or the downward movement of sugars, respectively, through these tissues. (25 分)
4. *Phytophthoras* may reproduce sexually or asexually. In many species, sexual structures have never been observed, or have only been observed in laboratory matings. In homothallic species, sexual structures occur in single culture. Heterothallic species have mating strains, designated as A1 and A2. When mated, antheridia introduce gametes into oogonia, and the union producing oospores. Asexual (mitotic) spore types are chlamydospores, and sporangia which produce zoospores. Sporangia may release zoospores, which have two unlike flagella which they use to swim towards a host plant. (25 分)