【所有答案請在答案紙上依序作答】

I. 單選題：(每題 1 分，共 10 分) ＊ 下列題目請在試卷內的「選擇題作答區」作答。

1. Cell wall containing peptidoglycan: A. *Ulothrix* B. *Merismopedia* C. *Euglena* D. *Laminaria*
2. An algal division containing members no motile stage, no flagella:
   A. Cyanophyta B. Haptophyta C. Charophyta D. Phaeophyta
3. An algal division containing members no unicellular organism:
   A. Phaeophyta B. Rhodophyta C. Chrysophyta D. Pyrrhophyta
4. Cell wall containing composition of agar: A. Cyanophyta B. Chrysophyta C. Rhodophyta D. Phaeophyta
5. Cell wall H-shaped: A. *Zygnema* B. *Scytonema* C. *Archaeonema* D. *Tribonema*
6. A typical bryophyte sporophyte consists of: A. a leafy or thallose body B. a foot, seta, and sporangium C. antheridia and archegonia borne on stalked disks D. filamentous protomena
7. In which of the following is the sporophyte capable of livimg as independent plant:
   A. *Riccia* B. *Porella* C. *Anthocéros* D. *Marchantia*
8. The vegetative body of the acellular slime molds is a coenocytic mass of protoplasm called a:
   A.plasmodium B. pseudoplasmodium C. mycelium D. haustorium
9. Which of the following is a zygomycete: A. *Saccharomyces* B. *Rhizopus* C. *Saprolegnia* D. *Penicillium*
10. Yeasts are members of the:A. Zygomycotina B. Ascomycotina C. Basidiomycotina D. Fungi Imperfecti

II. 解釋名詞：(每題 3 分，共 15 分) ＊ 下列題目請在試卷內的「非選擇題作答區」作答。

1. growth; development, morphogenesis
2. apical meristem, primary meristem, secondary meristem
3. sporogenesis; gametogenesis; embryogenesis
4. actinostele, eustele, atactostele
5. strobilus, cone, inflorescence

III. 問答題: (共 75 分) ＊ 下列題目請在試卷內的「非選擇題作答區」作答。

1. 綠藻門(Chlorophyta)包含的藻種很多，請分別舉例說明群體的(colonial)、絲狀的(filamentous)、膜狀的(membranous)和多細胞的(coenocytic)綠藻可能的演化途徑。答案中所列舉的綠藻屬名請用拉丁文學名。(10%)
2. 藻類的生殖方式非常的多樣化，請舉例說明藻類的各種無性和有性的生殖(含生活史)。答案中所列舉的藻類屬名請用拉丁文學名。(10%)
3. 繪圖說明四種擔子(basidium)的形態，並各舉一例說明之。答案中所列舉的擔子菌類屬名請用拉丁文學名。(10%)
4. 請以地錢(*Marchantia*)為例說明蘚苔植物的生活史，並詳繪其雌、雄生殖器官和孢子體之構造。(10%)
5. What were some of the problems encountered by plants as they made the transition from the sea to the land, and what structures in terrestrial plants apparently solve those problems? (7%)
6. How do parenchyma, collenchyma, and sclerenchyma cells differ from one another? What are their respective functions? (7%)
7. What are leaf traces, and how are they indicative of the intimate relationship that exists between the stem and the leaf? What hypotheses have been proposed to explain the pattern of leaf arrangement on stems? (7%)
8. Explain why annual plants (structurally and physiologically) are better represented, both in number and in kind, in the deserts and semiarid regions of the world than anywhere else. (7%)
9. What are some of the conditions that promote outcrossing in angiosperms, and under what circumstances might self-pollination be more advantageous than outcrossing? (7%)

試題隨卷繳回