大葉大學 九十二 學年度 **研究所碩士班** 招生考試試題紙					
系 所 別	組 別	考 試 科 目 （中 文 名 稱）	考 試 日 期	節 次	備 註
分子生物科技	甲	生物化學	4 月 13 日	第 1 節 08:30~10:00	P1-1 共2頁

註：考生可否攜帶計算機或其他資料作答，請在備註欄註明（如未註明，一律不准攜帶）

1. Explain the following terms: (each 5 pts)
   a. Poly(A) tail
   b. Intron
   c. Exon
   d. TATA box
   e. Okazaki fragment
   f. Promoter (gene)
   g. Apoprotein
   h. Structure of glutamine
   i. Phospholipase C
   j. Ionophore

2. What are the eukaryotic DNA replication mechanisms and which enzymes are involved in these reactions? (10 pts)

3. What are the functions of the three eukaryotic RNA polymerases? (10 pts)

4. Predict the effect of mutating Asp102 of trypsin to Asn102 (a) on substrate binding and (b) on catalysis. (4 pts)

5. Draw the Lineweaver-Burk plots showing three modes of reversible enzyme inhibition. (10 pts)

6. Explain what are structural polysaccharides and storage polysaccharides and give two examples on each term. (6 pts)

7. Explain what is the mediated transport across membranes and give an example. (10 pts)