

請依序作答

- 一、解釋名詞(10%)
 1. testcross — reciprocal cross
 2. coepistasis — codominance
 3. telomerase — reverse transcriptase
 4. knockdown mutation — gene silencing
 5. GISH — XIST gene
- 二、試述遺傳重組(genetic recombination)造成後裔變異之模式，並舉其一例表達其理論重組型數目。(10%)
- 三、試述多倍體(polyploidization)途徑，並舉其一自然發生之模式，特色與應用。(10%)
- 四、設有一物種其基因組規模為 3×10^9 bp，試估算其基因組總長度與質量，並估算其理論基因拷貝數，實際又如何？為什麼？(10%)
- 五、試依分子遺傳中央準則以圖述基因表現流程，並例舉出只有轉錄物(transcript)之 RNA genes 之類型及機能。(10%)
- 六、How does the pedigree-selection breeding procedure differ from the bulk-population breeding procedure?(10%)
- 七、What are the advantages and disadvantages of early generation testing?(10%)
- 八、What is mass selection? How can the breeder modify mass selection to improve upon its effectiveness as a plant breeding method?(10%)
- 九、What is synthetic cultivar? How can a breeder predict the yield of synthetic cultivar?(10%)
- 十、Why are plant breeders interested in fertility regulating mechanism such as male sterility or self incompatibility?(10%)

試題隨卷繳回