

編號： 439 系所：生物化學暨分子生物學研究所乙組 科目：細胞生物學概論

本試題是否可以使用計算機：可使用，不可使用（請命題老師勾選）

試題八題共一頁，總分 100 分。請依題號順序於答案卷作答：未依序作答者不予計分。

1. Describe the stages of mitosis and meiosis. What are the major differences between mitotic and meiotic cell division? (15 %)
2. Describe the structure and functions of the endoplasmic reticulum and Golgi complex. (12 %)
3. Describe the components of the cytoskeleton and their functions. (12 %)
4. Describe the two pathways leading to cell death (death receptor pathway and mitochondrial pathway). (10 %)
5. Membrane carriers are integral membrane proteins that allow substrates to move across lipid bilayers. Please describe the three classes of membrane carriers based on mechanism. Please give an example of each. (12 %)
6. Describe the four types of intercellular junctions. (12 %)
7. State the role/function of the following proteins. (15 %)
  - a. Cyclins
  - b. Cyclin dependent kinases ( CDKs)
  - c. Caspase
  - d. Cullins
  - e. Ubiquitin
8. State the role of the following in vesicular transport. (12 %)
  - a. Signal sequence
  - b. SRP
  - c. Bip
  - d. SNARE