# 國立成功大學

# 112學年度碩士班招生考試試題

編　號：87

系　所：資源工程學系

科　目：資源循環工程

日　期：0206

節　次：第 3 節

備　註：可使用計算機

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※ 考生請注意：本試題可使用計算機。　請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

1. The definition of terms: (a) Elutriation (b) Cylindrical mills (c) Sphericity (d) Carrier Flotation (e) Spiral Concentration (20%)

2. The purpose of sizing? The definition of particle size? What is major sizing techniques in industry? What is the definition of meshes and standard sieve? (15%)

3. Please describe the grinding circuit and derive the circulation ratio through mass balance. (15%)

4. Please draw the figure and describe (a) path of a typical ball in a ball mill, (b) zones in a ball mill. (10%)

5. (a) Please describe three main controlling factors of jigging cycle in detail (b) and show the distribution of minerals on the jigging cycle (10%)

6. Please describe three major controlling factors of shaking table in detail, and show the distribution of minerals on the shaking table. (10%)

7. Describe the mechanism of collection. (a) collection of Pyrite by Xanthates, (b) collection of Galena by Xanthates, (c) collection of Feldspar by Oleic acid. (10%)

8. Please describe the figure about electrostatic separator. (10%)