國立中央大學九十學年度轉學生入學試題

全校二年級　　科目：普通物理　　共 1 頁

1. Give an example showing that an object could be in irregular motion. Then figure out how to quantitatively describe that irregular motion. (30 points)

2. A 100-Watts electric light bulb is turned on. If 10% of electric power is converted to that of visible lights, please roughly estimate the number of visible photons emitted out of the bulb per second. **Note: Planck's constant = $6.63*10^{-34}$ J sec.** (30 points)

3. From the viewpoint of molecular dynamics, explain what will be happened for the following situations:
   A) The liquid water is exposed to the air;
   B) The liquid water is put into an oil;
   C) The liquid water is frozen to an ice cube;
   D) The liquid water is put inside a microwave oven;
   E) The liquid water is applied by a static electric field. (40 points)