所別： 水文與海洋科學研究所 碩士班 不分組(一般生)　　　　共 _1_ 頁　第 _1_ 頁

科目： 水文學

本科考試禁用計算器　　　　　　　　　　　　　　　＊請在答案卷(卡)內作答

1. Define and explain the following terms:
   (1) Hydraulic radius (5%)
   (2) Dewpoint (5%)
   (3) Flood plains (5%)
   (4) Evaporation (5%)
   (5) Base flow (5%)
   (6) Precipitation (5%)
   (7) Confined aquifer (5%)
   (8) Effects of hysteresis (5%)
   (9) Porosity (5%)
   (10) Watershed (5%)

2. How to use the water balance method to estimate the evaporation of a reservoir. (15%)

3. Use the Thiessen polygon method (5%) and an arithmetic method (5%) to determine the average rainfall for the watershed shown in the following table for the precipitation depths and areas shown.

Station number	1	2	3	4
Precipitation (mm)	6	5	4	8
Area (km^2)	20	20	10	15

4. What's the Darcy's law and its limitations. (10%)

5. There is uniform flow in a 90-ft wide rectangular channel with bed slope 0.04 percent and Manning's n is 0.015. If the depth is 5 ft, calculate the velocity and flow rate. (15%) (Hint: $4.5^{2/3} = 2.726$)