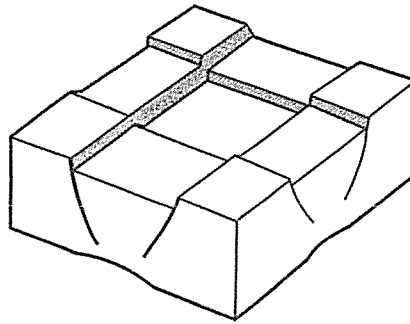
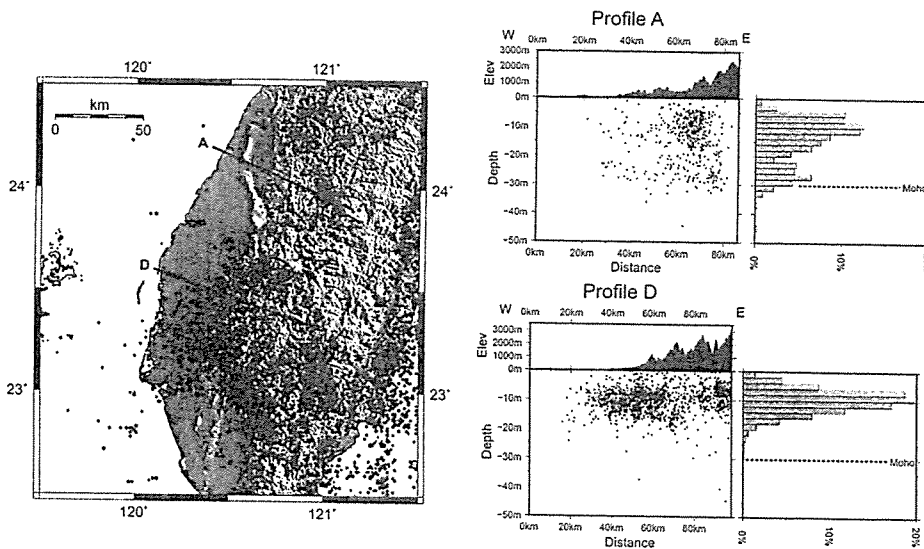


1. Explain the following terms (30 points): (1) strain rate; (2) cross section & profile; (3) cataclastic flow; (4) stress shadow; (5) hydrostatic pressure; (6) Poisson ratio
2. Describe the principal stress axis variations and fault forming during a igneous dike intrusion (請描述火成岩脈侵入過程中主應力軸的變化與形成的斷層形態，10 points)
3. What is column and rose diagrams? When do we use the column and rose diagrams? (10 points)
4. Two orthogonal systems of normal faults shown as the following figure, please give a mechanic explanation for two sets of normal faults in terms of stress regime. (10 points)

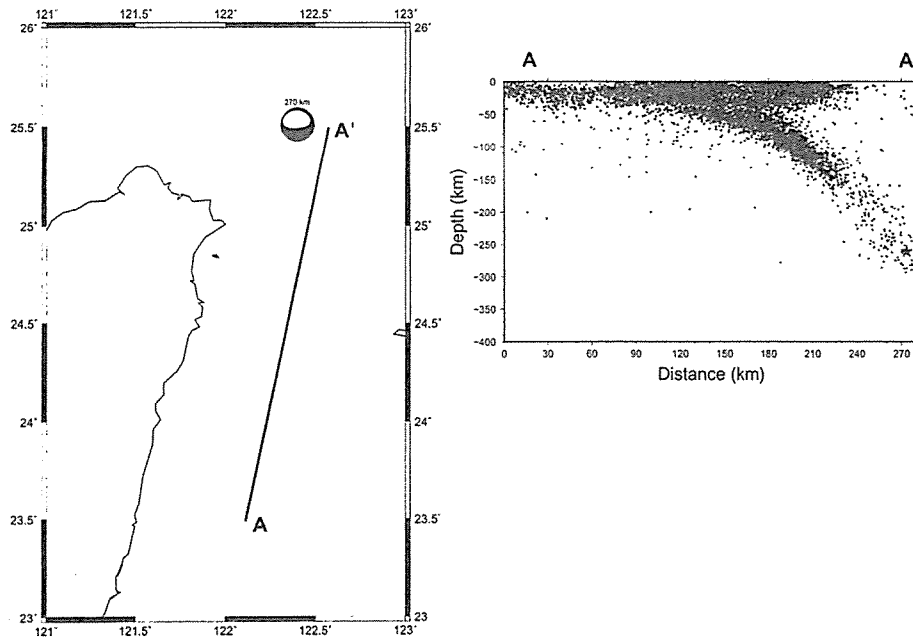


5. Explain the rheological strength in central Taiwan in terms of seismicities along the profiles A and D. (10 points)



見背面

6. What are the geological factors in formation of curved fold-and-thrust belt? (15 points)
7. (a) Draw the relationship of three principal stresses and three types of faults based on Anderson's theory. (3 points)
(b) What are the assumption and limitation in Anderson's theory of faulting? (2 points)
(c) Draw focal mechanisms with P and T axes of three types of faults based on Anderson's theory. (3 points)
(d) A M_L 6.8 earthquake occurred offshore of northeastern Taiwan on December 11, 2014 in the subducted Philippine Sea Plate (see following figure, hypercenter of earthquake in solid star) and the focal depth is about 270 km, explain the characteristics of this earthquake in terms of the forces acting on a subducted slab. (7 points)



試題隨卷繳回