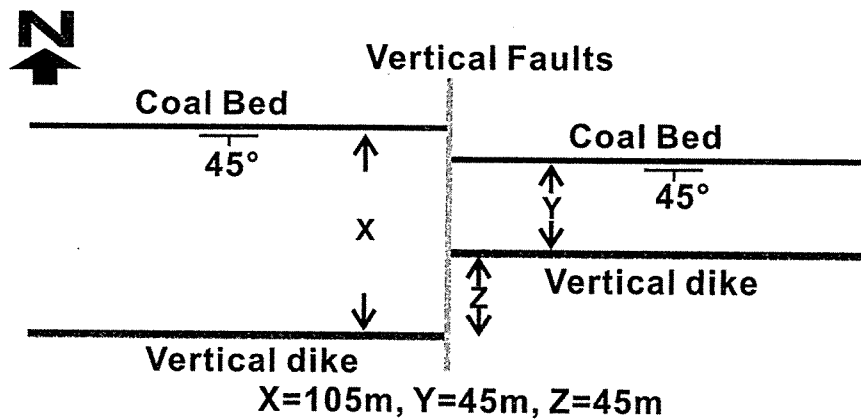
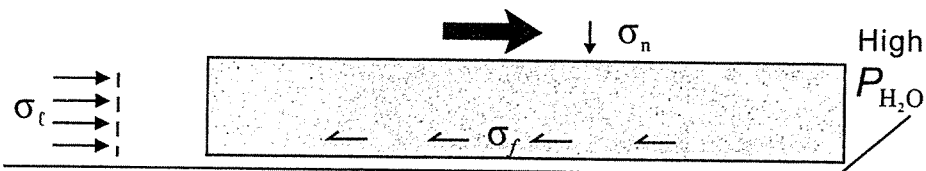


1. 解釋名詞 (25 points) : (1) Apparent dip; (2) profile; (3) kinematic analysis; (4) brittle-ductile transition; (5) Griffith theory.
2. Please describe in detail Anderson's theory of fault. (請詳細說明安得生的斷層理論)(10 points)
3. 計算下圖斷層的淨位移量(net slip)、水平位移和垂直位移，並說明此斷層的性質(何種斷層、抬升及侵蝕的部位)。(15 points)



4. Calculate the σ_1 applied in the block and σ_f for resistance stress with high fluid pressure at basal detachment. Explain why the thrust sheet could move in a long distance without crushing rock. Assume block dimension is 100 km * 10 km * 5 km, block density is 2700 kg/m³. The coefficient of friction on basal detachment $\mu_b = 0.8$ (Byerlee's law). Uniaxial compressive strength is 50 MPa (sandstone) as rock strength. The pore fluid factor λ is 0.9 (ratio of pore fluid pressure to overburden pressure). (10 points)



5. Draw figures to explain the progressive development of slaty cleavage via the formation of pencil structure. (10 points)
6. Draw and explain what kinds of shear sense indicators could be observed in a sinistral ductile shear zone? (10 points)
7. Draw the figure for the antiformal syncline and synformal anticline in a folding structure and explain the deformation process according to your figure. (10 points)
8. Explain the characteristics of transform and transcurrent faults. (10 points)

試題隨卷繳回