本試題是否可以使用計算機： □可使用 ， ☑不可使用   （請命題老師勾選）

1. Name some features on the sedimentary bedding surfaces that provide clues about depositional environment.   9%

2. What are stress and strain, and what is the relation between them?   9%

3. Describe how seismic waves can be used to infer that the outer core is molten while the inner core is solid.   9%

4. What radiometric dating method would to be suitable for obtaining the age of (a) a rhyolite thought to be about 100 million years old; (b) an Archean granite containing uraninite; and (c) charcoal from an archaeological site thought to be 10,000 years old?   10%

5. Contrast the denudation potential of a landscape in a rainy climate, as compared to a landscape in a dry climate.   9%

6. What primary factors influence shear stress and shear strength on hill-slopes? How can the shear strength of sediment or a rock mass on a hill-slope suddenly change?   9%

7. Why is it that stream velocity generally increases down-stream, despite a decrease in stream gradient?   9%

8. What causes water to rise to or above the ground surface in an artesian well? 9%

9. What atmospheric factors cause most of the world's large hot deserts to be concentrated in belts lying between $20°$ and $30°$ from the equator?   9%

10. How and why are the temperature and salinity of surface ocean water related to latitude?   9%

11. Describe the carbon cycle and indicate why we regard it as one of the most important biogeochemical cycles.   9%