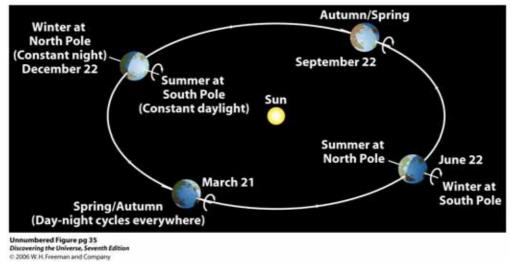
Introduction to Astronomy [普通天文學] HW061002

due in one week

- Find out what the Alexandrian Library was. Around 200 BC, its librarian and director Eratosthenes devised a way to measure the circumference of the earth, to an admirable accuracy. Describe his method.
- 2. Our textbook has a special section called "What If ...". Such a hypothetical question usually is very inspiring because we must understand something thoroughly enough in order to consider what if things could have been different otherwise. In such a What-If column in page 35, one is faced with a question what it is like if the Earth were tilted in such a way that its rotation axis lied in the orbital plane, as shown below. In fact Uranus has a rotation just like this. Describe what kind of differences it would make (for our life, for what we observe) if that were the case for Earth. State your reasoning.



- 3. What is the difference between the umbra and the penumbra of a shadow? What is a penumbral eclipse of the Moon?
- 4. Photocopy a flight route map from Taipei to New York from an airline company website. Confirm that the route is close to a great circle.
- 5. How many more sidereal months than synodic months are there in a year? Explain the reason.