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NAME: _____

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Define the following terms and answer the related questions.

I. PRECESSION: _the way in which the Earth wobbles as it revolves ____

1. How frequently does the Earth complete a cycle of precession?

__once every 25,000 years_____

2. Where is the Earth now in the cycle?

__closest to the sun in Northern Hemisphere winter_____

II. ORBITAL ELLIPITICITY: _Earth's orbit flexes from more circular shape to more oval shape____

1. What happens when the Earth's orbit is most elliptical?

___distance from Earth to Sun & intensity of sunlight varies greatly__

2. How long does it take to complete an elliptical cycle?

___about 100,000 years_____

III. NUTATION: _variation in axial tilt_____

1. What causes the Earth's seasons?

___tilt of Earth's axis_____

2. How do the seasons vary with nutation?

__variation in axial tilt – greater tilt = harsher seasons_____

3. How long is a cycle of nutation?

__about 40,000 years_____

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IV. CLIMATE VARIATION: _precession, orbital ellipticity, and nutation cylces combining to produce changes in climate___

1. What happens when all three cycles unite to produce cooler summers?

_winter ice doesn't melt, glaciers form, sea levels fall – ice age_____

2. What happens when all three cycles unit e to produce warmer summers?

_glaciers melt, sea level rises, Southern Hem. has cooler summers___

Why doesn't the climate in the Southern Hemisphere affect the cycle of Ice Ages? ___there is less land in Southern Hemisphere so less glacial area___

Where are we now in the cycle? __scientists believe we are coming out of_ __an ice age._____