

*[Answer Sheet]*

*Theoretical Question 1*

***When will the Moon become a Synchronous Satellite?***

- (1) The current value of the total angular momentum of the Earth-Moon system is

$$L =$$

- (2) When the periods of rotation of the Earth and the revolution of the Moon become equal, the duration of one rotation of the Earth is (in units of the present day)

$$T =$$

- (3) The amount of time required for the rotation of the Earth and the revolution of the Moon to have the same period is (in units of the present year)

$$t_f =$$