Nom et Prénoms :		

Note:

/10

## M1-SOAC TR3

## **Chapter 3**: Geophysical Waves



sareme	
	Let's focus on planet Earth, whose radius is $R = 6400 \text{ km}$ .
/2	<b>1)</b> Compute the Coriolis parameter $f$ at $25^{\circ}N$ and then at $25^{\circ}S$ .
	1, compare the content parameter, at 25 % and then at 25 5
/1	<b>2)</b> Plot $f$ in function of the latitude (from $-90^{\circ}S$ to $90^{\circ}N$ ).
<i>,</i> ,	

/1	3) derive the formulation of the meridional variation of the Coriolis force $\beta$ (also called the Rossby parameter).
/2	<b>4)</b> Compute $\beta$ at the equator and at 45° $N$ .
/1	<b>5)</b> Plot $\beta$ in function of the latitude (from $-90^{\circ}S$ to $90^{\circ}N$ ).
/2	6) Compute the distance between 150°E and 90°W at the equator and then at 45°N.
/1	7) Which formula would you use if you had to compute the distance between Paris ([48°N;
, 1	2°E]) and Rio de Janero ([23°S; 43°W]?)