What do Period and Frequency mean?

The Period T is the number of seconds it takes for something to complete 1 entire cycle/revolution.

The Frequency f is the number of cycles/revolutions completed by an object in 1 second.

$$T = \frac{seconds}{cycle}$$

$$f = \frac{cycles}{second}$$

$$v = 2\pi R/T$$

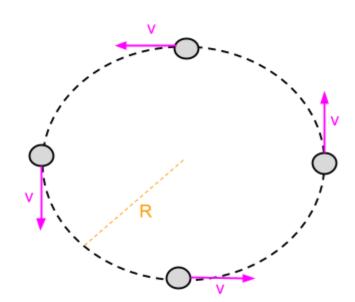
$$v = 2\pi Rf$$

v = speed of the object moving in the circle

T = period of the object

f = frequency of the object

R = radius of the circle traveled



Are there any conditions that must be met in order for those formulas to be true?

The formula $v=\frac{2\pi R}{T}$ and $v=2\pi Rf$ are only true for objects moving <u>at constant speed</u> in a circle

Warning: "RPM" stands for revolutions per minute. You can convert from RPM to m/s since 1 revolution is equal to a distance of 2pR, and 1 minute is equal to 60 seconds. Use conversion factors.