## 11 Physics 9 The Cosmic Engine - Part 2 Study online at quizlet.com/\_25jz0j Quizlet

1. geocentric	system is one which has the centre of the earth as its reference point; the model of the solar system which has the earth at the centre
2. giant stars	large, highly luminous stars which are brighter than main sequence stars of the same colour; giants represent a late phase in stellar evolution
3. heliocentric model	one which has the sun as the centre for measurements
4. hertzsprung- russle diagram	a diagram which displays the brightness of stars versus either their colour, spectral class or surface temperature
5. hubble constant	the constant that relates the speed of recession of the galaxies to the age of the universe
6. infrared	long-wave radiation emitted by hot objects with wavelengths greater than 700nm and less than 1mm
7. inverse square law	a relationship in which one quantity is directly proportional to the inverse of another quantity squared
8. ionosphere	a spherical shell of ionised gas surrounding the earth; it can be used to reflect short-wave radio waves
9. Kepler's laws	three laws relating the motion of the planets
10. light-year	the distance that light travels in one year
11. line spectrum	the spectrum of an element consisting of lines in certain frequencies (colours) only (each line being an image of the slit of the spectroscope)
12. luminosity	a measure of the actual brightness of an astronomical object
13. main sequence	a region on the H-R diagram containing the majority of stars; it is in this region that stars spend the main part of their lives converting hydrogen into helium
14. matter	everything that exists that has mass and takes up space
15. microwaves	electromagnetic waves with wavelengths ranging from 1mm to 0.1m
<sup>16.</sup> neutron star	a star at the end of its evolution; its mass similar to the sun with diameter 20km
17. Newtons law of universal gravitation	the force of attraction between two masses is proportional to the product of the masses and inversely proportional to the square of the distance between their centres

<sup>18.</sup> nucleosynthesis	the production of the elements by nuclear reactions
19. <b>nucleus</b>	the dense positive core of the atom containing almost all the mass of the atom; made up protons and neutrons
20. parallax	the apparent movement of an object against a background, when viewed from different positions