

# GSA-

## Question: 1

Differentiate between a star and planet. What is magnitude of a star and how the color of stars is correlated with their temperatures?

## Answer:

Differences between star and planet as they are both celestial bodies located in outer space.

Star	Planet
1 Star is a massive shining sphere of hot gas.	1 Planet is a round body in space that orbits a star.
2 A star shines by releasing light produced by nuclear fusion.	2 Planet do not produce light.
3 Different heavenly objects revolve around star such as planet, dwarf -	3 Object That revolve around planets are called, satellite - (moon)

## Star

planet, asteroid  
etc

## planet

4 Stars revolve around the centre of their galaxy.

5 Stars having very high temperature like from sun therefore sun has a surface temperature of 5500 to 6000°C.

Example are sun, proxima centauri and pulsar star

4 Planets revolve around star.

5 Planets derive energy and heat from sun therefore the ones near to sun are hotter.

Example are Earth, Venus, Mars, Neptune, Uranus and Jupiter etc.

## Magnitude of star:

In astronomy magnitude of star and other celestial bodies is the measure of brightness of star. An object's and star's

apparent magnitude depends on its luminosity and their distance.

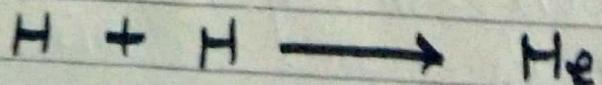
→ Relationship between color of stars and their temperature:

A star's color provides direct measurement of its surface temperature.

~~color of star~~  $\propto$  color of star or temperature of star.

The hottest stars shine blue-white, while the coolest are dull orange or red.

4 Stars produce their energy through nuclear fusion. For most stars this process is dominated by a process called the proton-proton chain. A sequence of events that transforms ~~two~~ hydrogen atom in to helium.



good answer!!