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 tempreture?

Answer:

Differences between star and planet as they are both celetial 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 produe light.
3. Different heavenly objects revolve around star such as planet, dwarf	3. Object that revolve around planets are called. statellite (moon)

Star	planet
planet, asteroid etc	
4 Stars revolve around the centre of their galaxy.	4 Planets revolve around star.
5 Stars having very high tempreture like sun has a surface tempreture of 5500 to 6000°C.	5 Planets drive energy and heat from sun therefore the ones near to sun are hotter.
Example are sun, proxima centauri and pistol star	Example are Earth Venus, Mars, Neptune, Uranus and Jupiter etc.

Magnitude of star:

In astronomy magnitude of star and other celetial 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 tempreature.

~~color of star ∝ color of~~

→ **color of star ∝ tempreture of star.**

The hottest stars shine blue-white, while the coolest are dull orange or red.
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 ~~four~~ hydrogen atom in to helium.

$$H + H \longrightarrow He$$