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Q:(a) Differentiate between Star and Planet. What is the magnitude of Star and how the colour of Star Corelated with tempreture.

Answer:

Use blue and black colors only

	Star	Planet
1.	Star is a massive shining sphere of hot body.	Planet is a round body in a space that orbits around a Star.
2.	A Star shining by realising heat which is produced by Nuclear fusion.	Planet do not realising heat.
3.	Heavy Astronomical bodies revolve around Star i-e planet, dwarf	objects that revolve around a planet called Satillites (moon)
4.	Star revolve around the Center of Galaxy	planets revolve around the Star.
5.	Stars are very high tempreture like Sun	Planets obtained energy from Star Stars.
	Example: Sun	Example: Earth,

⇒ The magnitude of Star refers to the brightness of star seen from earth. There are two main types of magnitudes:

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(1) Apparent Magnitude:

This is a brightness of star as seen from earth. Lower the distance higher the brightness.

(2) Absolute Magnitude:

It is a true brightness of star without the effect of distance.

⇒ The relationship between color and temperature is summarized by wien's displacement law. which stated that peak wavelength of emitted ~~radiation~~ radiation is inversely proportional to the temperature. Thus hotter stars peak at shorter wavelength (bluer) and cooler stars peak at longer wavelength. (redder).

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How can the sun have such a strong gravitational field if it is made up of gases?

Answer:-

The sun has a strong gravitational field despite being composed primarily of gases (about 74% Hydrogen and 24% Helium). The gasses that the sun does not diminish its gravitational field because gravitational strength depends on the total mass, not the state of matter. The sun's massive mass ensures a strong gravitational influence on objects in the solar system.

Discuss in more detail