"Sir Aftab"

M T W T F S Malayka Kasi Date: __/__/20__

# Past Paper GSA

**Q1-** Differentiate between a star and a planet what is the magnitude of a star and how the color of stars is correlated with their temperature:- (5)

## Introduction:-

The solar system consits of star, planets, dwarf planets, satellites and solar bodies. The age of the solar system is 4.6 billion. Our solar system is located in Orion-cygnus.

Solar System → small solar bodies (asteriods; comets)

(Star) Sun  Planets  dwarf planets  satellites

## Difference between Star and Planet:-

i- **Star:**
It is an asteronical objects that emits their own light produced by thermonuclear reaction and it revolves around the centre of galaxy.

**Planet:**
It is an asteronomical object that revolves around the star.

ii- **Light:**
Star has its own light but planets donot have their own light.

iii- **Position:-**
Stars can change their position but due to their substantial distance it takes a long time, whereas, the planets changes their position

iv- **Size:-**
Stars have larger size unlike stars, planets are smaller

in size.

**Temperatures:**

Stars have high temperatures where as, planets

**Twinkle effect:**

Stars twinkle but this phenomenon is absent in planets

**Shape:**

Stars are dot shaped through earth perspective while planets are spherical in shape.

**Matter:-**

The elements which are present in the stars are hydrogen, helium & other elements where as, solid, liquid, gases & other combination of thereon.

There is only one star in solar system where as there are eight planets in solar system.

b- **Magnitude:-**

"It is the measure of brightness of stars and other celestial body."

**Colour of a Star:-**

The magnitude of a star is measured in a certain wavelength or color using filter.

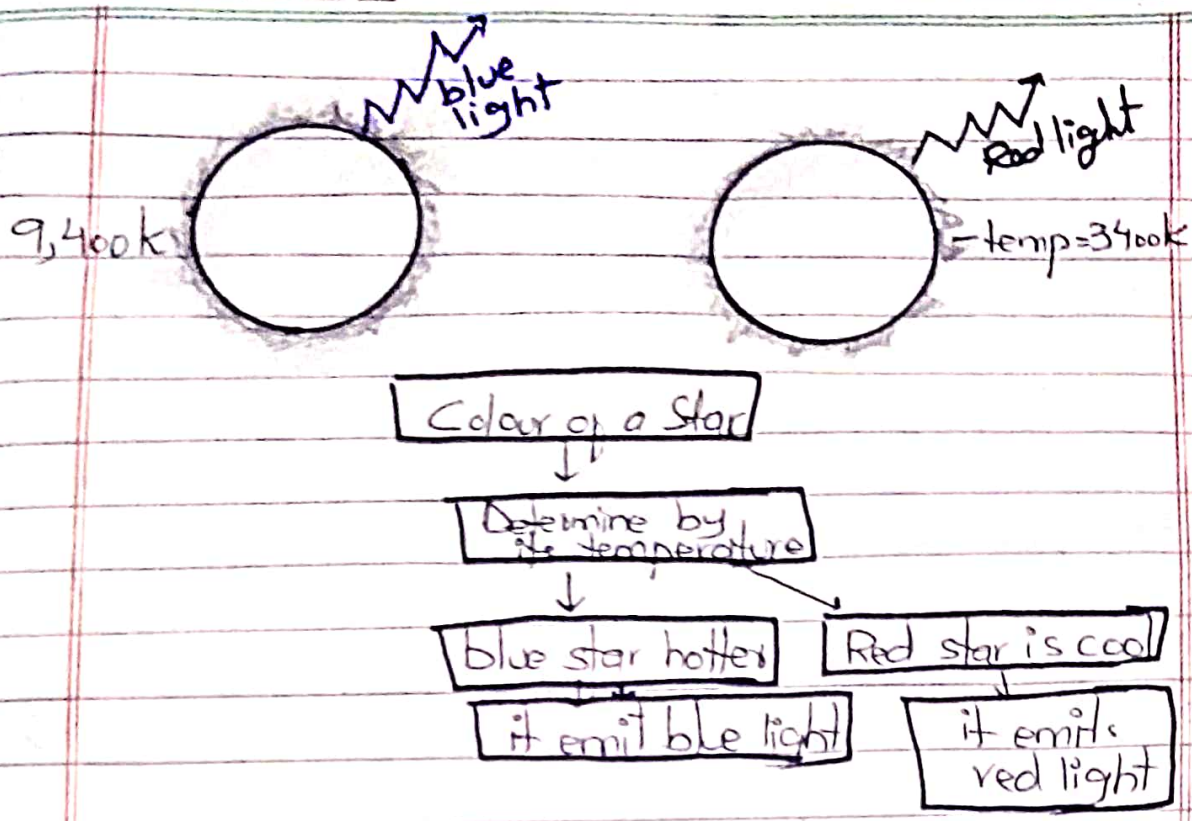
The surface temperature of a star determines the color it emits.

A hot blue star Sirus, the surface temperature is about 9,500 k

Blue stars are hotter than yellow, yellow stars are hotter than red stars. In case of a blue star, Sirus the surface temperature is 9,500 k so it emits blue light, it looks brighter in blue filter than red filter. While in case of Red star, beleiguese the surface temperature is about 3,400 k so it emits more red light and it looks bright in red filter.

Red
Beleiguese → Yellow → Blue

Cool → hot




## Conclusion:-

There are many differences between stars and planets. Stars revolves around centre of galaxies where as planets revolves around the stars in a fixed orbit. The stars come with many shapes, colours and size. So the colour of a stars is determine by its temperature. The more the temperature, blue colour appears where as lesser a low temperature, causing red colour.