

Mention full qs statement for proper evaluation. Without that these are just notes and cannot be awarded

## ~~BLACK~~ HOLE: <sup>cosmic body or</sup>

A black hole is a <sup>↑</sup> region in space where the pulling force of gravity is so strong that light is not able to escape.

The strong gravity occurs because matter has been pressed into a tiny space.

This compression can take place at the end of a star's life.

Some black holes are a result of dying stars.

Every galaxy in the universe has a black hole including the Milky way galaxy, in which our solar system exists.

For example:

Sagittarius A\* is a supermassive black hole that exists at the centre of Milky way.

## Discovery of Black Hole:

Albert Einstein was the first person who predicted the existence of black holes in 1916 in his general theory of relativity.

But the first official black hole was discovered in 1964 by astronomers when

a sounding rocket detected celestial sources of X-rays. The first black hole detected, according to NASA, was

Cygnus X-1, located within the Milky Way in the constellation of Cygnus, the Swan.

However, the term "black hole" was coined by an American astronomer John Wheeler.

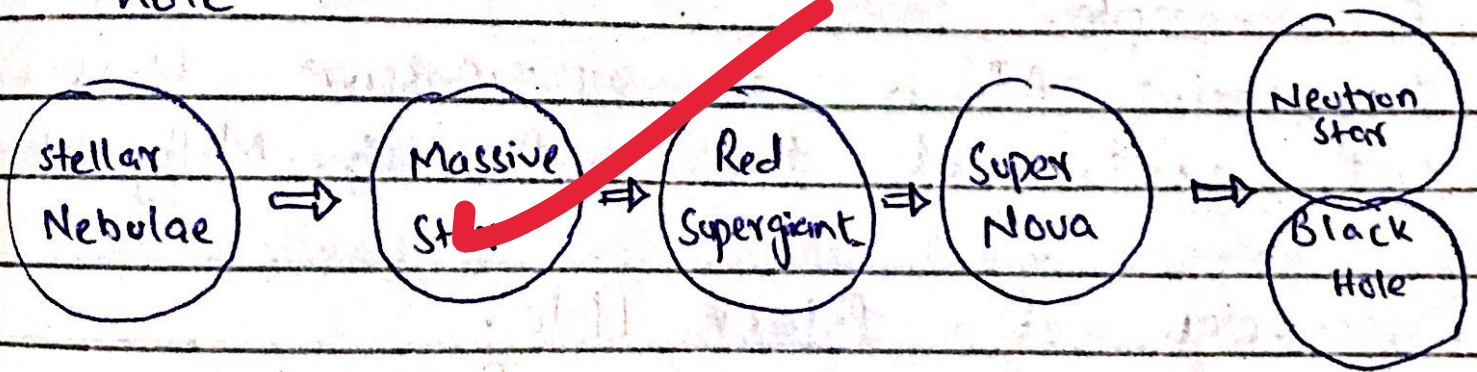
Moreover, in 1971, astronomers determined

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the X-rays were coming from a bright blue star orbiting a strange object - black hole.

### Formation of Black Hole:

A black hole is formed by the death or explosion of extremely massive stars with sizes of more than three solar masses. At the end of a massive star's life, the core of the star becomes highly unstable and collapses. And it explodes as a supernova forming a black hole.



What's expected inside it?

Cover all aspects in your notes