

Q: What is galaxy? Describe its types.

Definition:

Galaxy is the fundamental unit of the universe. It is composed of hundreds of thousands of stars, dust and gas.

Types of galaxies:

1) Elliptical galaxies:

These are the most abundant type of galaxies. Because of their age and dim qualities, they are frequently outshined by younger, brighter collection of stars.

• E0 to E7 are elliptical galaxies.

2) Spiral galaxies:

In these type of galaxies, the stars, dust and gas are gathered in spiral arms that spread outwards from the galaxy's center.

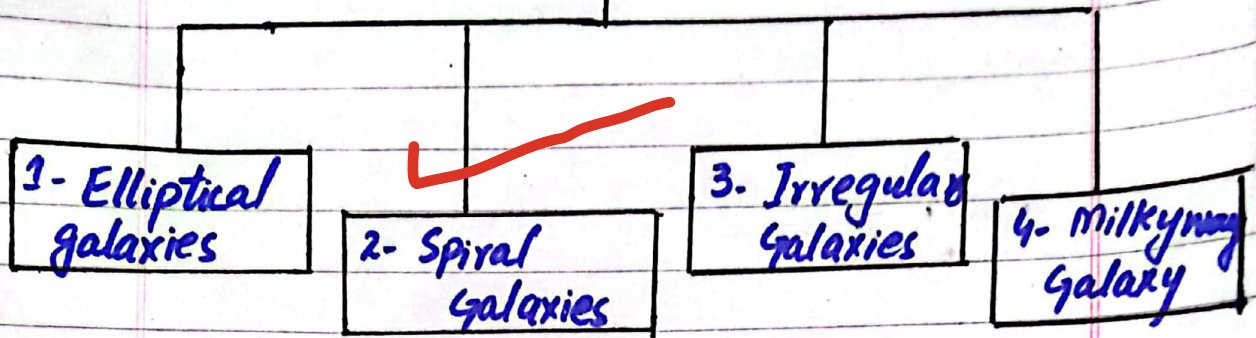
• Depending upon the spread of, they are classified as Sa, Sb, and Sc.



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## Types of galaxies



### 3) Irregular galaxies

These galaxies are smaller and have no particular shape.

- Star formation takes place because of presence of gas and dust.

### 4) Milkyway galaxy:

- Milkyway galaxy is a type of spiral galaxy, having 1,00,000 light years in diameter. Milkyway galaxy is present as a part of collection of other galaxies, called as local group.
- Earth is a milkyway galaxy.



## Q: write a note on Universe formation.

Universe is believed to be formed 13.8 billion years ago as a result of Big Bang.

### Singularity:

Entire universe was closed in a tiny bubble, that was denser and hotter and named as singularity. It resulted into explosion and universe was created.

### Galaxy formation:

The universe grew from smaller than atom to bigger than galaxy. Expansion and cooling resulted into conversion of energy into matter and anti-matter. These two opposite factors destroyed each other and some matter survived.

protons and neutrons were also formed. At lower temperature, several hydrogen and helium nuclei formed. These atomic nuclei captured electron to form atom.

discuss it in more detail.