

Q: What is galaxy? Describe its types.

Definition:

Galaxy is the fundamental unit of the universe. It is composed of ~~thundereds~~ 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 outshone 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 on the spread of, they are classified as Sa, SB, and Sc.

Types Of Galaxies

1- **Elliptical**
galaxies

2- **Spiral**
galaxies

3. **Irregular**
galaxies

4- **Milkyway**
Galaxy

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:

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- 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.

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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.