What is a galaxy? The Earth belongs to which galaxy?

Answer

Galaxy

"A galaxy is a gravitationaly bound system. It contains blackholes in the center, Planets, vast clusters of gas and dust. satellites etc."

Galaxies are of different age. Most of them are between 10 billion years and 13.6 billion yeass old. Some galaxies are as old as universe its elf - 13.8 billi yeass. (NASA)

The Galaxies are of different shapes - Eliptical, Spiral, lenticular and irregular.

The Earth belongs to ~~Milkyway~~ a Milky Way galaxy. It is ~~in~~ the Solar System which is located in the Orion Cygnus arm of milkyway. The shape of milkyway is spiral.

short answer. discuss it in more detail by giving subheadings.....

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Q Briefly describe What is big bang theory?

ANSWER:

"Have not those who disbelieve known that heavens and earth were joined together as one United piece." (Al-Quran 21:30)

Big Bang Theory

Concept: The whole universe came out from a hot, tiny, dense and singular point - Expanding & stretching. This theory is about (how) Scientists think that how Universe began.

The idea of big bang was given by George Lamaitre in 1927.

The big bang and the expansion of Universe was confirmed and proved by the Edwin Hubble two years later.

The Edwin Hubble said galaxies are moving away from each other and from us. meaning that Universe is still expanding.

2.5

A tiny, hot beginning:

When the Universe began, it was tiny, hot particles mixed with energy and light. It cooled down and particles grouped together forming atoms and these groups from which stars, planets, galaxies, comets, asteroids and black holes are formed.

The Universe is 13.8 billion years old.

7

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a 5 marks answer should be atleast on 2 sides of a page.....

Q Differentiate between a star and a planet. Briefly describe the life cycle of a star from a Nebula to a Black Hole. (5)

Answer

Planet	Star
⇒ "A celestial body that orbits a star and dominates its orbit by displacing similarly size objects nearby."	⇒ "A luminous, hot and massive body composed of gases - specially hydrogen and helium tightly compressed due to huge amount of gravity."
⇒ It does not produce heat and light, it is visible when the light of star reach on it.	⇒ It does ~~not~~ produces light and heat with help of nuclear fusion in the core.
⇒ It is formed from the left over material remained from formation of stars	⇒ It is formed from the clouds of gases and dust.
⇒ It has stable long-term existance.	⇒ It has a well-defined life cycle from birth to death.
⇒ It is composed of rocks like Earth and Mass, and gases like Jupiter and Saturn.	⇒ It is composed of gases specialy ~~gases on~~ hydrogen and helium.

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Life Cycle of a Star (Nebula – Black Hole)

The life cycle of a star starts from the clouds of gas and dust which is known as Molecular clouds which collapse due to gravity and attract further to collapse and form a Stellar Nebula from which a high mass star appears which turns into a Red supergiant which turns into a SuperNova then into Neutron star and finally a Black Hole.

This life cycle takes millions of years to form a black hole while stellar nebula turns into black dwarf passing through the different phases in billions of stars.

Life cycle of star from Nebula – Black Hole

Stellar Nebula

↓

High Mass star

↓

Red supergiant

↓

Super Nova

↓

Neutron star

↓

Black Hole

4)

this is a good answer.....

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