

BANGLADESH INTERNATIONAL SCHOOL, (ES), RIYADH
Notes and worksheet on English Literature
THE UNIVERSE

Name: _____ Grade7 _____ Date _____

Answer the questions in brief.

1. What are red giants?

Ans. When stars get older, they cool off, swell up one hundred times larger, and turn red. These aging stars are called red giants.

2. What is nebula?

Ans. A nebula is an interstellar cloud in outer space, made up of dust, hydrogen and helium gas, and plasma. It is formed when portions of the interstellar cloud collapse and clump together due to the gravitational attraction of the particles that comprise them.

Answer the questions in detail.

1. How do the scientists classify the galaxies? Elaborate.

Ans. The scientists classify the galaxies by their shapes. There are four main galaxies: spirals, elliptical, barred spirals, and irregular-shaped galaxies.

- a. Spirals are disk-shaped galaxies with older stars in the centre and the newer stars in the arms
- b. Elliptical galaxies are the most common and ball or egg-shaped galaxies
- c. Barred-spirals galaxies are spirals whose central stars form a bar
- d. Irregular-shaped galaxies are the rarest and do not fit in any known pattern

2. How are quasars related to black holes?

Ans. Quasars are single spots of light in the sky that are farther away than most of the galaxies we can detect. They are spewing out absolutely enormous amounts of energy. It is plausible that there exist galaxies with huge black holes at their centre, about a billion times more massive than the sun. In such cases, the black hole would absorb vast quantities of matter and cause matter to accelerate and heat up, emitting trillions of packets of electromagnetic energy and creating the spectacle that we see in the night sky and call quasars. Therefore it is widely believed at the moment that quasars are black holes, and appear as massive ones.

Learn the meanings of the words below and make sentences with them.

galaxy- any of the large systems of stars, etc, in outer space

collapse- to fall down or fall in suddenly, often after breaking apart

clump – cluster of trees or plants

optimistic – expecting good things to happen or something to be successful

planetary – relating to a planet or planets

eerie – strange, mysterious and frightening: uncanny

compact - closely and firmly packed together

collide - crash, bang into each other.

particles - a very small part of something

elliptical – oval, egg-shaped

Answer the following questions in a phrase.

1. Which is the strangest object in the universe?

2. Who is the author of the expository text “The Universe?”

3. What do we use to gather information of the dark mysterious universe?

4. What is a light year?

5. What do we call the gigantic-tadpole shaped gases?

6. How old is a newly formed star inside the glowing disk?

7. From Earth, what is the nearest after the sun?

8. What is the name of a star mentioned in the text?

9. What is called M-16?

10. What is the speed of a spaceship?

Fill in the blanks with the appropriate words from the text.

1. The _____ is Earth's neighbor in the space.

2. The central _____ is much more crowded than our lonely part of space.

3. _____ is so huge that it is swallowing nearby galaxies.

4. The black hole contains more than one billion times the amount of _____ in our sun.

5. _____ are as mysterious as black holes.

Determine the statements below as true or false.

1. A black hole is a region of space where matter is squeezed together so tightly. _____

2. With the Hubble Space Telescope and other methods of gathering information, we are at the end of a golden age of discovery. _____

3. Looking at the distant galaxies in the universe with a telescope is like using a time machine to peer into the future. _____

4. Many galaxies in space are so distant that their light fades out before it reaches the earth. _____

5. All the stars we see in the night sky are in our imagination. _____

Circle the best answer.

1. All stars are born within nebulas, which are eerie, dark clouds of _____.
 - a. Nitrogen gas and dust
 - b. Oxygen gas and dust
 - c. Hydrogen gas and dust

2. The photo of _____ also called M-16 was taken by the Hubble Space Telescope in 1995
 - a. Eagle Nebula
 - b. Planetary Disk
 - c. Red Giant

3. Alpha Centauri, the nearest star after the sun is a distance of _____.
 - a. 4.3 light years or twenty six trillion years
 - b. 4.3 light years or twenty five trillion years
 - c. 4.3 light years or twenty seven trillion years

4. Our solar system is about _____ away from the centre of the Milky Way.
 - a. Thirty thousand light years
 - b. Thirty eight thousand light years
 - c. Thirty two thousand light years

5. The mysterious space-pods are gigantic tadpole-shaped clumps of gas, each several billion miles across _____.
 - a. Thrice the size of our solar system.
 - b. Once the size of our solar system
 - c. Twice the size of our solar system

Match the columns below.

S.N	Column A		Column B
1	Usually each star grows at a different speed,		the hot core within the star makes the surrounding cloud of gases glow
2	When the red giant has shed its outer layers		and most clusters finally drift away.
3	The glow in the centre of each disk,		us than the moon is about ninety three million miles.
4	The sun, the closest star to us, is over four hundred times farther away from		are ten thousand times brighter than our sun is now.
5	Some of the young stars		is a newly formed star, about one million years old.

The End