

Questions 39–50

Galaxies are the major building blocks of the universe. A galaxy is a giant family of many millions of stars, and it is held together by its own gravitational field. Most of the material in the universe is organized into galaxies of stars, together with gas and dust.

Line

There are three main types of galaxies: spiral, elliptical, and irregular. The Milky Way (5) is a spiral galaxy: a flattish disc of stars with two spiral arms emerging from its central nucleus. About one-quarter of all galaxies have this shape. Spiral galaxies are well supplied with the interstellar gas in which new stars form; as the rotating spiral pattern sweeps around the galaxy, it compresses gas and dust, triggering the formation of bright young stars in its arms. The elliptical galaxies have a symmetrical, elliptical or (10) spheroidal shape with no obvious structure. Most of their member stars are very old, and since ellipticals are devoid of interstellar gas, no new stars are forming in them. The biggest and brightest galaxies in the universe are ellipticals with masses of about 1013 times that of the Sun; these giants may frequently be sources of strong radio emission, in which case they are called radio galaxies. About two-thirds of all galaxies (15) are elliptical. Irregular galaxies comprise about one-tenth of all galaxies, and they come in many subclasses.

Measurement in space is quite different from measurement on Earth. Some terrestrial distances can be expressed as intervals of time: the time to fly from one continent to another or the time it takes to drive to work, for example. By comparison, (20) with these familiar yardsticks, the distances to the galaxies are incomprehensibly large, but they too are made more manageable by using a time calibration, in this case, the distance that light travels in one year. On such a scale, the nearest giant spiral galaxy, the Andromeda galaxy, is two million light years away. The most distant luminous objects seen by telescopes are probably ten thousand million light years away. Their (25) light was already halfway here before the Earth even formed. The light from the nearby Virgo galaxy set out when reptiles still dominated the animal world.

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39. The word "major" in line 1 is closest in meaning to

(A) intense
(B) principal
(C) huge
(D) unique

40. What does the second paragraph mainly discuss?

(A) The Milky Way
(B) Major categories of galaxies
(C) How elliptical galaxies are formed
(D) Differences between irregular and spiral galaxies

41. The word "which" in line 7 refers to

(A) dust
(B) gas
(C) pattern
(D) galaxy

42. According to the passage, new stars are formed in spiral galaxies due to

(A) an explosion of gas
(B) the compression of gas and dust
(C) the combining of old stars
(D) strong radio emissions

43. The word "symmetrical" in line 9 is closest in meaning to

(A) proportionally balanced
(B) commonly seen
(C) typically large
(D) steadily growing

44. The word "obvious" in line 10 is closest in meaning to

(A) discovered
(B) apparent
(C) understood
(D) simplistic

45. According to the passage, which of the following is NOT true of elliptical galaxies?

(A) They are the largest galaxies.
(B) They mostly contain old stars.
(C) They contain a high amount of interstellar gas.
(D) They have a spherical shape.

46. Which of the following characteristics of radio galaxies is mentioned in the passage?

(A) They are a type of elliptical galaxy.
(B) They are usually too small to be seen with a telescope.
(C) They are closely related to irregular galaxies.
(D) They are not as bright as spiral galaxies.

47. What percentage of galaxies is irregular?

(A) 10%
(B) 25%
(C) 50%
(D) 75%

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48. The word "they" in line 21 refers to
    (A) intervals
    (B) yardsticks
    (C) distances
    (D) galaxies

49. Why does the author mention the Virgo galaxy and the Andromeda galaxy in the third paragraph?
    (A) To describe the effect that distance has on visibility
    (B) To compare the ages of two relatively young galaxies
    (C) To emphasize the vast distances of the galaxies from Earth
    (D) To explain why certain galaxies cannot be seen by a telescope

50. The word "dominated" in line 26 is closest in meaning to
    (A) threatened
    (B) replaced
    (C) were developing in
    (D) were prevalent in

THIS IS THE END OF THE READING COMPREHENSION SECTION.

IF YOU FINISH IN LESS THAN 55 MINUTES, CHECK YOUR WORK IN THIS SECTION ONLY.

DO NOT READ OR WORK ON ANY OTHER SECTION OF THE TEST.

WHEN YOU ARE READY TO CHECK YOUR ANSWERS, USE THE ANSWER KEY ON THE FOLLOWING PAGES TO DETERMINE WHICH QUESTIONS YOU ANSWERED CORRECTLY AND INCORRECTLY.

LIVEWORKSHEETS