

Units and Measurements

Multiple Choice Questions (MCQs)

1. What is the distance light travels in one year in kilometers?

- a) 9.46728×10^{10}
- b) 9.46728×10^{11}
- c) 9.46728×10^{12}
- d) 9.46728×10^{13}

2. How many kilometers are in 1 Astronomical Unit (AU)?

- a) 1.496×10^6
- b) 1.496×10^7
- c) 1.496×10^8
- d) 1.496×10^9

3. What is the distance in kilometers for 1 parsec?

- a) 3.086×10^{12}
- b) 3.086×10^{13}
- c) 3.086×10^{14}
- d) 3.086×10^{15}

4. How many light years are approximately in 1 parsec?

- a) 2.26156
- b) 3.26156
- c) 4.26156
- d) 5.26156

5. If a star is 4.2 light years away, what is its distance in parsecs?

- a) 1.287
- b) 2.287
- c) 3.287
- d) 4.287

6. Calculate the distance in AU for a star located 10 parsecs away.

- a) 1,062,650 AU
- b) 1,562,650 AU
- c) 2,062,650 AU
- d) 2,562,650 AU

7. A planet is 5 AU from Earth. Convert this distance to kilometers.

- a) 5.48×10^8
- b) 6.48×10^8
- c) 7.48×10^8
- d) 8.48×10^8

8. A galaxy is 2 megaparsecs (Mpc) away from Earth. Convert this distance to light years.

- a) 6.52312×10^5
- b) 6.52312×10^6
- c) 6.52312×10^7
- d) 6.52312×10^8

9. The distance to a star is 50 parsecs. What is this distance in light years?

- a) 113.078 light years
- b) 123.078 light years
- c) 133.078 light years
- d) 163.078 light years

10. If the Sun is 1 AU from Earth, how many parsecs is this distance?

- a) 4.84814×10^{-5}
- b) 4.84814×10^{-6}
- c) 4.84814×10^{-7}
- d) 4.84814×10^{-8}

Key

- 1. c
- 2. c
- 3. b
- 4. b
- 5. a
- 6. c
- 7. c
- 8. b
- 9. d
- 10. b