

Question 11. Distance to the galaxies

who was the first to determine the distances to an external galaxy:

- Galilei Galileo
- Vesto Slipher
- Edwin Hubble
- Knut Lundmark

Question 12. Henriette Leavitt

what was the instrumental contribution by Henrietta Leavitt ?

- the distance to extragalactic nebulae
- the period-luminosity relation of Cepheids
- the colour-luminosity relation of Cepheids
- the period-luminosity relation of RR Lyrae stars

Question 13. Aristotelean cosmology

Aristotle suggested that the reason for anything coming about can be attributed to four different types of active causal factors. Which of the following is NOT one of these ?

- efficient cause
- original cause
- material cause
- formal cause

Question 14. Tycho Brahe & Uraniborg

Where did Tycho Brahe build his famous observatory Uraniborg ?

- Hvend
- Prague
- Regensburg
- Copenhagen

Question 15. Tycho Brahe and the Solar System

which model of the solar system did Tycho Brahe support:

- Ptolemaic/geocentric
- heliocentric/Copernican
- geo-heliocentric
- Keplerian

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Question 46. Kepler's Laws and Mars

In which two great publications did Kepler describe his struggle with Mars, leading him to the three laws of Kepler ?

- Mysterium cosmographicum* & *Dialogo*
- Harmonices mundi* & *Philosophiae Naturalis Principia Mathematicae*
- Astronomia nova* & *Epitome astronomiae copernicanae*
- Dioptrica* & *Mysterium cosmographicum*

Question 47. Hubble and extragalactic distances

of which galaxy did Edwin Hubble manage to determine for the first time the distance, and what was his estimate ?

- the Large Magellanic Cloud, 150,000 lightyears
- the Andromeda Galaxy/M31, 1 million lightyears
- the Small Magellanic cloud, 30,000 lightyears
- the Large Magellanic Cloud, 1 million lightyears

Question 48. De Stella Nova

Why is the publication of *De Stella Nova* (1572) by Tycho Brahe devastating for the Aristoteleian cosmological views ?

- Tycho's observations were so accurate that they proved Aristotle's predictions wrong.
- it proved that the universe did not have a center
- the appearance (and disappearance) of a new star on the sky proved that the world beyond the Moon is not eternally unchanging
- it proved that beyond the sphere of the stars there are still material things

Question 49. Hubble Law

What does the Hubble Law state ?

- galaxies are moving away from us
- the recession velocity of a galaxy increases proportional to its distance
- redshift is a manifestation of the Doppler effect
- the period of Cepheids is proportional to their brightness

Question 50. Big Bang

Who first named the term Big Bang?

- George Lemaitre
- Fred Hoyle
- Edwin Hubble
- George Gamow