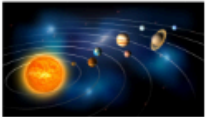


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Crash Course Astronomy #43: Dark Energy

Name: _____ Date: _____

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1. The current model for the origin of the Universe is called the _____.
2. The Andromeda galaxy is moving toward us because _____ can overcome the expansion of space on small scales.
3. A Type Ia supernova occurs when a _____ collapses after reaching a critical mass.
4. Type Ia supernovae are useful because they act as _____, meaning we know their intrinsic brightness.
5. The observed fainter brightness of distant supernovae revealed that the Universe's expansion is actually _____.
6. The unknown force causing the Universe's accelerated expansion is called _____.
7. Dark energy appears to be a property of _____ itself.
8. Only about 5% of the Universe is made of _____ matter.
9. The _____ of the Universe refers to its overall curvature and large-scale shape.
10. The concept that more distant galaxies appear to recede faster is called _____ redshift.
11. The _____ Universe is the part of the cosmos we can currently observe.
12. Space can expand faster than light because the speed limit applies to objects _____ space, not space itself.
13. The farther away a galaxy is, the more _____ its light becomes due to the expansion of space.
14. Over time, due to accelerating expansion, the observable Universe is actually getting _____.
15. Eventually, only our own _____ may remain visible, as all others move beyond the cosmic horizon.

Crash Course Astronomy #43: Dark Energy KEY

1. The current model for the origin of the Universe is called the **Big Bang**.
2. The Andromeda galaxy is moving toward us because **gravity** can overcome the expansion of space on small scale.
3. A Type Ia supernova occurs when a **white dwarf** collapses after reaching a critical mass.
4. Type Ia supernovae are useful because they act as **standard candles**, meaning we know their intrinsic brightness.
5. The observed fainter brightness of distant supernovae revealed that the Universe's expansion is actually **accelerating**.
6. The unknown force causing the Universe's accelerated expansion is called **dark energy**.
7. Dark energy appears to be a property of **space** itself.
8. Only about 5% of the Universe is made of **normal** matter.
9. The **geometry** of the Universe refers to its overall curvature and large-scale shape.
10. The concept that more distant galaxies appear to recede faster is called **cosmological** redshift.
11. The **observable** Universe is the part of the cosmos we can currently observe.
12. Space can expand faster than light because the speed limit applies to objects **in** space, not space itself.
13. The farther away a galaxy is, the more **redshifted** its light becomes due to the expansion of space.
14. Over time, due to accelerating expansion, the observable Universe is actually getting **smaller**.
15. Eventually, only our own **galaxy** may remain visible, as all others move beyond the cosmic horizon.

15 Questions

Answer Key Included

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