

TEST #1 – section 1
Sep 21, 2015

1. How do we define life? Provide two examples that fail our definition yet they are still considered alive, and two examples that meet the definition yet they are not considered alive. Make sure that you argue your examples properly.
2. Explain, in one sentence per term, what is: (i) the Milky Way; (ii) meteorite; (iii) globular cluster; (iv) light matter; and (v) spectral absorption lines.
3. What circumstances in ancient Greece led us to label it as the Cradle of science, what caused its demise in Europe, and what led to the Renaissance?
4. Why did the geocentric model remain a viable theory for almost two millennia? What observations seemed to confirm it? Which objections to the heliocentric model kept it in place?
5. The nebular theory can explain the "oddballs" in our solar system, such as our Moon, Neptune's tilt, the many moons of gaseous planets, etc. How is that?
6. If the Sun lost 15% of its mass (such episodes are quite typical as stars deplete hydrogen in their cores), what would happen to Earth's orbital period if its distance from the Sun remained the same?