Unit 2 Objective Questions KEY

1. Timekeeping (agriculture) astrology/ religion, historical record
2. Fixed objects placed in specific places to determine the summer and winter solstice
3. They tried to map out the universe and movement of the planets
4. Universe was geocentric
5. By observing lunar eclipses he could determine by the shadows that Earth was spherical, he also calculated the radius of the Earth
6. Whether the universe was geocentric or heliocentric
7. Geocentric-tried to account for retrograde motion using epicycles
8. It was not until Copernicus put forth the theory that the universe was heliocentric
9. Geocentric to heliocentric
10. Discovered that celestial bodies were not perfect, sunspots on sun, mountains and valleys on the moon, Jupiter had orbiting satellites and Earth was not the center of the universe
11. Saw phases of Venus through telescope thus disproved Ptolemaic model
12. Considered heresy to go against the church beliefs
13. First to use scientific method to prove his theories
14. Took detailed and accurate measurements of stars and planets, discovered Supernova that suggested Aristotle starry sphere model was not perfect and changed
15. Took Tycho’s measurements and developed three mathematical laws pertaining to elliptical orbits
16. Planets move in ellipses not circles, move faster when closer to the sun and devised mathematical formula to prove theory
17. An object in motion stays in motion an object at rest, stays at rest example: rocket in space, total net force on an object causes acceleration example: tennis ball and racket, with every action there is an opposite and equal reaction example: slam book on the desk and the desk pushes back
18. Mass attracts mass-moon pulls on earth and the earth pulls on the moon
19. Mass is the amount of matter in an object, weight is the amount of force the earth’s gravity exerts on your body
20. Speed is a change in velocity, velocity is a direct rate if motion
21. At the sun
22. 1/9th the gravitational force
23. Stays the same
24. Both people are pulled downward towards the earth and not each other
25. Yes, we would still have gravity because the earth would still have mass
26. There is gravity because the moon has mass. No, the gravitational pull would keep you grounded
27. There is air pressure on earth but not on the moon
28. Everything is falling at the same rate together
29. Gravity is greatest when closest to the sun “whip” motion
30. Mercury is closer to the sun
31. They both exert equal and opposite force on each other
32. The velocity will increase because as the cloud collapses inward towards its axis, it spins faster
33. Gravity is the shape of space time
34. Curves in space-time causes light to bend space
35. Hypothesis a single assertion that must be tested, theory rules and principles that can be applied, law- a theory that has been refined through testing and confirmed. Rule of nature,
36. Model demonstrated illustrated a theory