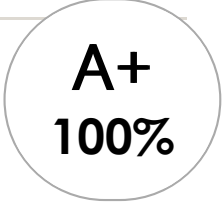


25 Multiple choice questions



A+
100%

1. that region of space in which a mass experiences a force of attraction from other masses
 - a. gravitational constant
 - b. gravitational acceleration
 - c. geostationary orbits
 - d. **CORRECT: gravitational field**

2. orbits with an altitude that ranges from 250 km to 1000 km above the surface of the Earth
 - a. aether wind
 - b. geostationary orbits
 - c. g-forces
 - d. **CORRECT: low-Earth orbits**

3. the force of attraction between two or more masses
 - a. metre
 - b. aether
 - c. **CORRECT: gravity**
 - d. g-forces

4. the constant in Newton's Law of Universal Gravitation
 - a. **CORRECT: gravitational constant**
 - b. gravitational field
 - c. gravitational potential energy
 - d. gravitational acceleration

5. where the length of a moving rod appears to contract in the direction of motion relative to a stationary observer
 - a. mass dilation
 - b. aether wind
 - c. **CORRECT: length contraction**
 - d. low-Earth orbits

6. the acceleration due to gravity on Earth
 - a. **CORRECT: gravitational acceleration**
 - b. centripetal acceleration
 - c. gravitational field
 - d. gravitational constant

7. directed towards the centre of a circle required for an object to travel in a circular path
 - a. Einstein, Albert
 - b. aether wind
 - c. centripetal acceleration
 - d. **CORRECT: centripetal force**

8. orbits in which the satellite has a period of 24 hours, but does not orbit in the equatorial plane about the Earth
 - a. geostationary orbits
 - b. low-Earth orbits
 - c. escape velocity
 - d. **CORRECT: geosynchronous orbits**

9. the idea that mass and energy are different forms of the same entity
 - a. measurement
 - b. **CORRECT: mass-energy**
 - c. aether
 - d. metre

10. German-born physicist best known for his work on relativity
 - a. mass-energy
 - b. **CORRECT: Einstein, Albert**
 - c. measurement
 - d. centripetal force

11. an experiment conducted to measure the speed of the Earth through the aether
 - a. **CORRECT: Michelson-Morley experiment**
 - b. centripetal force
 - c. frames of reference
 - d. measurement

12. the work done to move an object a very large distance away to a point in a gravitational field
 - a. gravitational acceleration
 - b. **CORRECT: gravitational potential energy**
 - c. gravitational constant
 - d. gravitational field

13. objects or coordinate systems with respect to which we take measurements
 - a. mass-energy
 - b. measurement
 - c. inertial frame of reference
 - d. **CORRECT: frames of reference**

14. orbits in which the satellite has a period of 24 hours and orbits in the equatorial plane about the Earth
 - a. geosynchronous orbits
 - b. gravitational field
 - c. low-Earth orbits
 - d. **CORRECT: geostationary orbits**

15. transverse waves composed of alternating electric and magnetic fields, the components of which are perpendicular to each other and to the direction of the energy flow
 - a. **CORRECT: electromagnetic waves (radiation)**
 - b. length contraction
 - c. centripetal acceleration
 - d. mass dilation

16. measurements in units of the Earth's gravitational acceleration
 - a. **CORRECT: g-forces**
 - b. metre
 - c. aether
 - d. gravity

17. directed towards the centre of a circle about which an object is moving
- gravitational acceleration
 - length contraction
 - CORRECT: centripetal acceleration**
 - centripetal force
18. a hypothetical non-material formally hypothesised to permeate all space, having the property of propagating electromagnetic waves
- aether wind
 - metre
 - CORRECT: aether**
 - g-forces
19. this was predicted as the result if the Earth moved through the aether
- measurement
 - CORRECT: aether wind**
 - metre
 - aether
20. the process of comparing some quantity such as length, mass or time to a selected standard
- mass-energy
 - CORRECT: measurement**
 - aether wind
 - metre
21. a frame of reference which is at rest or moving with constant velocity; a frame in which Newton's Laws of Motion are valid
- geostationary orbits
 - CORRECT: inertial frame of reference**
 - frames of reference
 - centripetal force

22. the velocity needed for an object to escape from the Earth
- mass dilation
 - gravity
 - CORRECT: escape velocity**
 - aether wind
23. the idea that the mass of a moving object increases in relation to a stationary observer
- measurement
 - mass-energy
 - metre
 - CORRECT: mass dilation**
24. the distance travelled by light in $1/299\,792\,458$ of a second
- g-forces
 - aether
 - CORRECT: metre**
 - gravity
25. the movement of an object in a circular path
- CORRECT: circular motion**
 - gravity
 - mass dilation
 - aether wind