

9 Which of the following statements regarding the gravitational field strength and acceleration of free fall at the surface of the Earth is true?

- A** The gravitational field strength and the acceleration of free fall are always exactly equal at the Earth's surface, approximately 9.8 m s^{-2} , regardless of location.
- B** The acceleration of free fall is larger at the Equator than at the North and South Poles.
- C** The gravitational field strength varies significantly from the Poles to the Equator, while the acceleration of free fall is constant across the Earth's surface.
- D** The gravitational field strength is numerically greater than or equal to the acceleration of free fall.

10 The diagram shows two circular orbits around the Earth