1 **(a)** **(i)** State what is meant by a *field of force*.

.....

.....

..... [2]

(ii) Define *gravitational field strength*.

.....

..... [1]

(b) An isolated planet may be assumed to be a uniform sphere of radius 3.39×10^6 m with its mass of 6.42×10^{23} kg concentrated at its centre.

Calculate the gravitational field strength at the surface of the planet.

field strength = ... $N\,kg^{-1}$ [3]

(c) Calculate the height above the surface of the planet in **(b)** at which the gravitational field strength is 1.0% less than its value at the surface of the planet.

height = ... m [3]

[Total: 9]