6 **(a)** State a similarity between the gravitational field lines around a point mass and the electric field lines around a point charge.

.....

..... [1]

(b) The variation with radius r of the electric field strength E due to an isolated charged sphere in a vacuum is shown in Fig. 6.1.

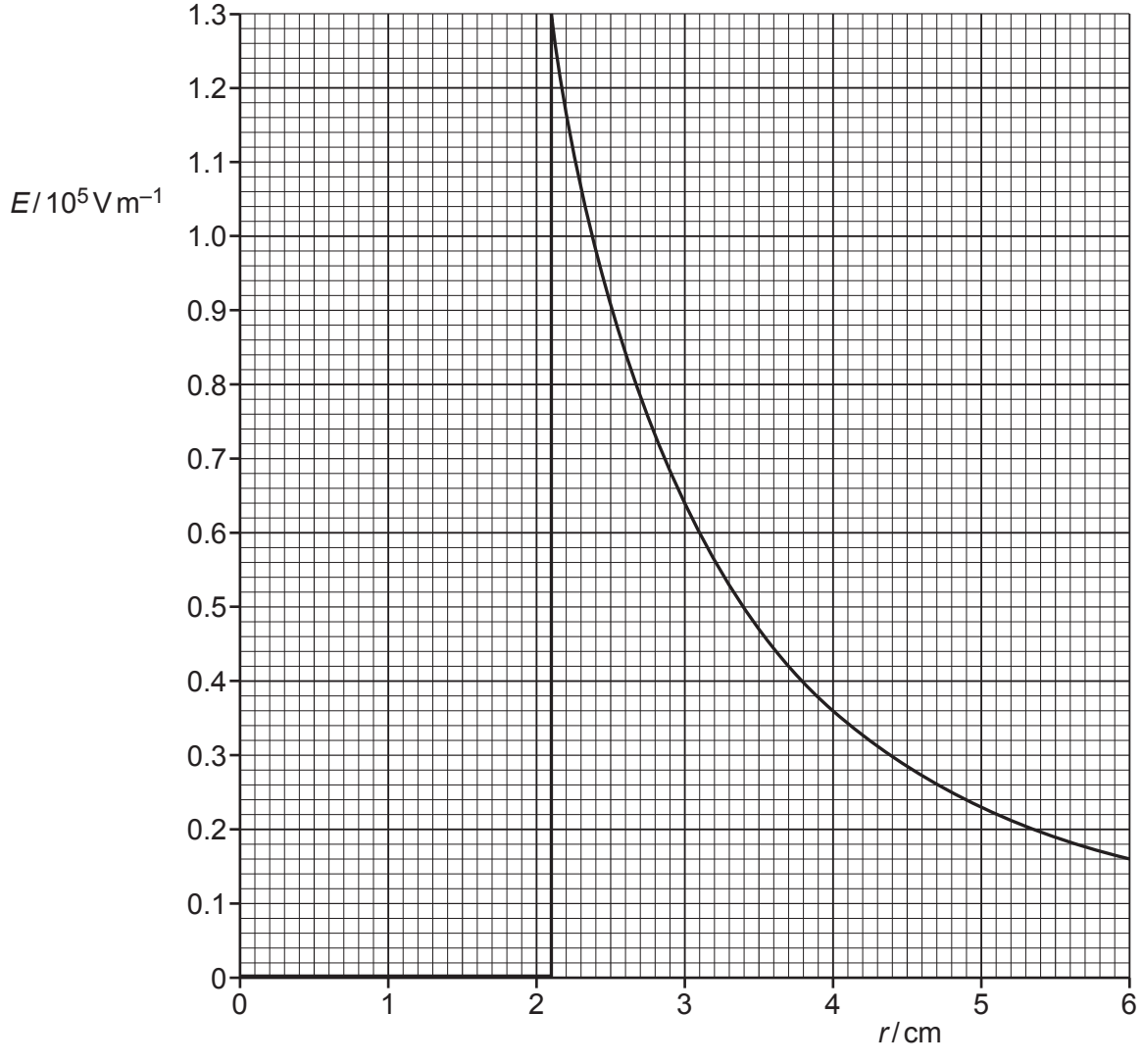

Fig. 6.1

Use data from Fig. 6.1 to:

(i) state the radius of the sphere

radius = ... cm [1]

(ii) calculate the charge on the sphere.

charge = ... C [2]

(c) Using the formula for the electric potential due to an isolated point charge, determine the capacitance of the sphere in **(b)**.

capacitance = ... F [3]

[Total: 7]