Question.

Which of the following is not true about the electric field intensity E of a uniformly charged solid sphere?
E is maximum at the surface of the sphere
E is directly proportional to the distance from the centre of the sphere
E decreases as a square of the distance from the surface of the sphere
E decreases as a square of the distance from the centre of the sphere.

Solution.

It's a classic problem of electrostatics and the solutions of this problem are well known. Electric field of uniformly charged solid sphere with radius R depends on the distance from the center the following:

$$For\ r \leq R: E(r) \sim r$$

$$For\ r \geq R: E(r) \sim \frac{1}{r^2}$$

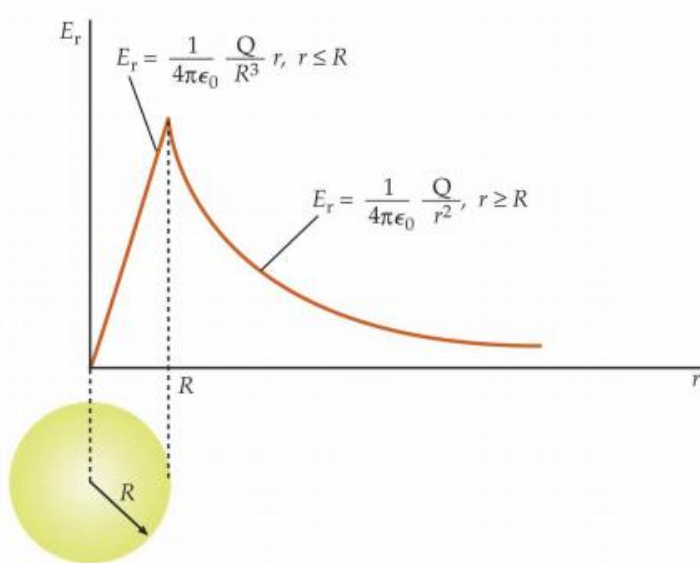So, we can draw the graph $E(r)$. See Fig.1.

Fig.1. Electric field of uniformly charged solid sphere.

As you can see from this graph $E(r)$ is maximum at the surface of the sphere and decreases as a square of the distance from the surface of the sphere.

But $E(r)$ is directly proportional to the distance from the centre of the sphere only before $r = R$ and decreases as a square of the distance not from the centre of the sphere, but from the surface of the sphere.

So, statements 1, 3 are true and statements 2, 4 are not true.

Answer.

E is directly proportional to the distance from the centre of the sphere

E decreases as a square of the distance from the centre of the sphere