Answer on Question #67147, Physics / Mechanics | Relativity

Explain the concept of gravitation around certain spherical surface on earth. Also require the field of gravitation,gravitational potential inside, on and outside the spherical surface.

Solution:

Newton's law of gravitation:

$$F = G\frac{M \times m}{r^2} \quad (1)$$

The gravitational potential energy measured relative to infinity of a mass, m, placed within the gravitational field of a spherical mass M can be calculated using:

$$E_p = -G\frac{M \times m}{r} \quad (2)$$

Gravitational potential, V, is given by the relationship:

$$V = -G\frac{M}{r} \quad (3)$$