**UNIT # 3 REVIEW – GRAVITATIONAL, ELECTRIC AND MAGNETIC FIELDS**

1. Topics covered in Unit # 3: (you should know them all)

* Newton’s Law of Universal Gravitation
* Orbital Speed
* Escape Velocity
* Black Holes
* Coulomb’s Law
* Electric Field Strength
* Electric Field Mapping
* Electric Potential
* Electric Potential Energy
* Motion of Particles in Electric Fields
* Parallel Plates
* Millikan
* Biot’s Law
* Right Hand Rule # 1
* Magnetic Field Strength of Coils
* Right Hand Rule # 2
* The Motor Principle
* Right Hand Rule # 3
* Force on Parallel Wires
* Force on Charged Particles
* Induction

1. Review questions:

* **Review all of the homework questions!**
* Textbook Questions: p. 426 – 433, especially Multiple Choice (# 1 – 14), 32, 37, 39, 42, 47, 52, 53, 57, 62, 64, 65, 68, 72, 73, 75, 76, any of the Evaluation questions

**\*\*It is not necessary to complete all of the Textbook Questions; only complete questions for topics with which you are struggling.\*\***

1. Communication question:

Consider:

1. Newton’s Law of Universal Gravitation

2. The conclusions from Millikan’s oil drop experiment; and

3. The Motor Principle.

In one well-written paragraph, explain which of these three major scientific breakthroughs you feel is the most important and / or has had the greatest impact on society. Be sure to support your opinion.