PHYS 328
HOMEWORK #3

Due : 19 September 2013

1. Problem 1 .33, p. 23 of text.

2. Problem 1 . 34, p. 23 of text

3. Problem 1 . 37, p. 26 of text.

4. Problem 1 . 40, p. 27 of text, 10 pts each part.

5. Problem 1 . 43, p. 31 of text, 10 pts each part.

6. Compute the gravitational potential energy of a star of mass M and radius R. Assume the star is of constant composition and density throughout. (Hint : Consider the star to be formed by a series of concentric shells of mass dm and thickness dr that fall onto the star from infinity.)

7. Problem 1.55, pp. 36 - 37 of the text, parts a), b), c), and e) (You have done part d) more accurately). (10 pts a), 10 pts b), 5 pts c), 10 pts e))