**King Fahd University of Petroleum & Minerals**

**Serial #0**

- 1 points for not writing your serial number

Electrical Engineering Department

EE315: Probabilistic Methods in Electrical Engineering (112)

**Quiz 4: Operation on One Random Variable- Expectation**

Name: Key (Solution)

 A random variable *X* has the density

$$f\_{X}\left(x\right)=\left\{\begin{matrix}\left(\frac{3}{32}\right)(-x^{2}+8x-12)&2\leq x\leq 6\\0&elsewhere\end{matrix}\right.$$

Find the following moments:

1. $m\_{0}$
2. Mean
3. & d) If the second moment $m\_{2}=16.8, $find the variance=$μ\_{2}$?

In general



 Good Luck, **Dr. Ali Muqaibel**