September 8,2015

QUIZ♯1 Math102-sec 6.

Net Time Allowed: 15 minutes

Name: **ID ♯ :** **Serial ♯:**

Exercise1:(05 points)

Let $$S = \lim_{n \longrightarrow \infty} \sum_{i=1}^{n} \frac{5}{n} \sqrt{5 + \frac{3}{n} i}\,.$$

1)- Write S as a definite integral (**Justify your answer!**).
2)- Evaluate the obtained integral in 1).

Exercise2:(05 points)

If f is a continuous function on $[-\frac{1}{2}, t]$ such that : $\int_{-\frac{1}{2}}^{t} e^{-x} f(x)\, dx = -\frac{1}{2} e^{-t} - \frac{1}{2} + t \tan t$, then find f. **Justify clearly your answer !**