In [1]:
```
import matplotlib.pyplot as plt
import numpy as np
```

In [9]:
```
T = np.zeros(5)
P = np.zeros(5)
T_qsort = np.zeros(5)
n = 0
with open('stats.txt', 'r') as f:
    for data in f:
        if n >= 0:
            data = data.split(' ')
            if n % 2 == 0:
                for i, s in enumerate(data):
                    if (i == 0):
                        s = s.split('s')
                        T[n // 2] = float(s[0])
                    elif (i == 3):
                        P[n // 2] = float(s)
            else:
                s = data[0].split('s')
                T_qsort[n // 2] = float(s[0])
        n += 1

S_p = T[0] / T
E_p = S_p / P
```

In [10]:
```
print(T)
print(P)
print(T_qsort)
print(S_p)
print(E_p)
```

```
[ 1.263496  1.018016  0.938371  0.982119  1.007735]
[  1.   2.   4.   8.  16.]
[ 1.048773  1.046133  1.042939  1.081523  1.042413]
[ 1.          1.2411357   1.3464781   1.2864999   1.25379787]
[ 1.          0.62056785  0.33661952  0.16081249  0.07836237]
```

In [11]:
```
plt.figure(figsize=(16, 5))
plt.plot(P, T, color='blue', label=u'T(P)')
plt.scatter(P, T, color='green')
plt.plot(P, S_p, color='yellow', label=u'S(P)')
plt.scatter(P, S_p, color='green')
plt.plot(P, E_p, color='red', label=u'E(P)')
plt.scatter(P, E_p, color='green')
plt.plot(P, T_qsort, color='orange', label=u'T_qsort, P = 1')
plt.scatter(P, T_qsort, color='green')
plt.legend()
plt.show()
```