| | T | Г | | | 1 0 | 1 0 |
|--|----------|----------|----------------------------------|--------------------------------|-------------------------------|-----------------------------|
| tag | accuracy | f1 score | accuracy for unknown words | accuracy for known words | number of unknown words | number of known words |
| A (إسما) B | 95.5 % | 63.38 % | 73.68 % | 97.54 % | 19 | 203 |
| B (رقم) | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 10 | 167 |
| C (إسم معرف) | 91.38 % | 93.69 % | 56.25 % | 94.94 % | 16 | 158 |
| B (رقم) C (إسم معرف) D (إضافة) E | 86.98 % | 65.18 % | 73.68 % | 88.67 % | 19 | 150 |
| E (منعوت) F | 97.63 % | 98.0 % | 66.67 % | 98.77 % | 6 | 163 |
| | 77.25 % | 64.62 % | 65.22 % | 78.92 % | 23 | 166 |
| G (حرف جر) | 93.48 % | 48.31 % | NULL | 93.48 % | 0 | 46 |
| (نعت) G (حرف جر) H (اسم مجرور) | 65.0 % | 49.24 % | 35.29 % | 86.96 % | 17 | 23 |
| I (و حدة قيس) J | 98.86 % | 49.71 % | 100.0 % | 98.85 % | 1 | 87 |
| J (واو العطف) K | 97.06 % | 49.25 % | NULL | 97.06 % | 0 | 34 |
| K (فعل مبني للمجهول) L | 76.92 % | 28.99 % | 50.0 % | 88.89 % | 8 | 18 |
| ل (المفعول المطلق) M | 33.33 % | 16.67 % | 33.33 % | NULL | 3 | 0 |
| M (أداةُ عَطْفٌ غير واو العطف) | 80.0 % | 44.44 % | NULL | 80.0 % | 0 | 5 |
| | 100.0 % | 100.0 % | NULL | 100.0 % | 0 | 406 |

Table 1: Performances for each tag using a first order HMM for fold 1 $\,$

| | | | accuracy for | accuracy for | number of | unknown |
|-----|----------|----------|--------------|--------------|-----------|------------|
| tag | accuracy | f1 score | unknown | known | unknown | words |
| | | | words | words | words | percentage |
| 0 | 94.77 % | 67.67 % | 67.78 % | 96.33 % | 78 | 9.67 % |
| 1 | 93.02~% | 65.56 % | 63.93 % | 95.2 % | 107 | 13.26 % |
| 2 | - | - | - | _ | - | - |
| 3 | - | - | - | - | - | - |
| 4 | - | - | - | - | - | - |
| 5 | - | - | - | - | - | - |
| 6 | - | - | - | - | - | - |
| 7 | - | - | - | - | - | - |
| 8 | - | - | - | - | - | - |
| 9 | - | - | - | - | - | _ |
| Avg | - | - | - | - | - | - |

Table 2: Performances using a first order HMM for fold $1\,$