tag	accuracy	f1 score	accuracy for unknown words	accuracy for known words	number of unknown words	number of known words
A (إسم)	92.04 %	60.62 %	54.55 %	93.95 %	11	215
B (رقم)	100.0 %	100.0 %	100.0 %	100.0 %	12	196
C (إسم معرف)	93.64 %	92.96 %	68.75 %	96.18 %	16	157
D (إضافة)	87.21 %	85.69 %	71.43 %	88.61 %	14	158
E (منعوت)	92.75 %	90.6 %	60.0 %	95.31 %	10	128
F (نعت)	66.29 %	45.98 %	40.0 %	69.68 %	20	155
G (حرف جر)	97.37 %	49.33 %	100.0 %	97.22 %	2	36
H (إسم مجرور)	65.0 %	44.3 %	58.33 %	67.86 %	12	28
I (وحدة قيس)	99.01 %	83.08 %	100.0 %	98.97 %	4	97
J (واو العطف)	96.77 %	49.18 %	NULL	96.77 %	0	31
K (فعل مبني للمجهول)	92.0 %	47.92 %	100.0 %	91.3 %	2	23
L (المفعول المطلق)	0.0 %	0.0 %	NULL	0.0 %	0	1
M (أداةُ عَطْفٌ غير واو العطف)	100.0 %	100.0 %	NULL	100.0 %	0	13
.	100.0 %	100.0 %	NULL	100.0 %	0	786

Table 1: Performances for each tag using a second order HMM for fold 4

tag	accuracy	f1 score	accuracy for unknown words	accuracy for known words	number of unknown words	unknown words percentage
0	93.72 %	64.13 %	70.0 %	94.81 %	78	9.67 %
1	92.53 %	63.0 %	64.75 %	94.19 %	107	13.26 %
2	94.14 %	65.6 %	70.87 %	95.39 %	88	10.9 %
3	93.94 %	86.92 %	68.67 %	95.02 %	75	9.29 %
4	93.42 %	86.61 %	66.02 %	94.81 %	92	11.4 %
5	-	-	-	-	-	-
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	-	-	-	-	-	-
9	-	-	-	-	-	-
Avg	-	-	-	-	-	-

Table 2: Performances using a second order HMM for fold 4