6Yhfi b_YbYf': U\ fYf'j Yfi fgUW h'i bZU``
Ui Z'5 * &' '5i hc VU\ b`ghi bXYb`Ub [
[YgdYffh

9]b`VYhfi b\_YbYf': U\ fYf'j Yf`cf'Ui Z'XYf'5 * &'X]Y'?cbhfc``Yž
k Ug'ghi bXYb`Ub[Y'J c``gdYffi b[ `bUW`i bZU``i bX
i a Zub[fY]WY`F Y]b][ i b[ gUfVY]hYb`YfZcfXYfhY"

9]b`gWfYW`_]WYf'J cfZU``Ui Z'XYf'5 * &'gcf[h'ZØf'5i ZfY[i b["'9]b
' &!`Ä\ f][ Yf'A Ubb`\Uh'Xcfh]b`XYf'B UW h'j ca`A]hk cW`Ui Z
8cbbYfghU[`X]Y'?cbhfc``Y`ØVYf'gY]b': U\fnYi [ `j Yf`cfYbž'k Ä\ fYbX
Yf`U`_c\c`]g]Yfhi`bhYfk Y[g'k Uf"'8]YgYg[YZÄ\ f`]WY`J Yf\U`hYb
ZØ\fhY`ni`Y]bYa`i bZU``ž'XYf'b]W h'bi f`XYb': U\ fYf'gY`Vghž'gcbXYfb
Ui W`X]Y'[ YgUa`hY': U\ fVU\ b`VYhfc ZYb`\Uh"'8]Y'Dc`nY]'`U`h`Ua
8cbbYfghU[a`cf[ Yb`9]bnY`\Y]hYb`ni f'?c``]g]cb`VY`Ubbh[Y[YVYb"

8Yf'gWk Yfk]Y[YbXY`J cfZU``YfY][bYhY`g]W`nk]gWYb`XYb
5bgW`i gghY``Yb`HØf\_]ga Ø\`Yž'X]Y`ni f'; Ya`Y]bXY`B c\ZY`XYb
[Y\`Øfhž'i bX`6]f_YbZY`X"K Ä\ fYbX`Y]bYf'fUgUbhYb': U\fk`Y]gY`_Ua
XYf'A Ubb`bUW`Y]bYa`i, VYf\c`j`cf[ Ub[ `]bg`GW`Yi XYfb`i bX
_fUW`hY`a`]h`\c\Ya`HYa`dc`]b`X]Y`@Y]hd`Ub_Y"'8i fW`XYb
9]bgW`U[ `k`i fXY`gc[Uf`XYf'A chcfV`cW`XYg': U\fnYi [g
\YfUi`g[ Yf]ggYbž'k Ug`X]Y`G]hi`Uh]cb`Yb`cfa`j`YfgW`ÄfZhY"'8Uni`_Ua
Y]b`[ fc» ZÄW][ Yg`HfØa`a`YfZY`Xž'XUg`b]W h'bi f`Y]b`F]g]_c`ZØf
UbXYfY`J Yf\_Y\ fghY]bY\ a`Yf`XUfghY``hYž'gcbXYfb`Ui W
Ui`g`Ui ZYbXY`6Yhf]YVgghc ZY`ZfY]gYhnhY"

5i gk]f_i b[Yb`Ui Z'XYb`J Yf_Y\ f

≠Zc`[ Y`XYg`i bZU``g`a`i gghY`X]Y`5 * &'ZØf`X]Y`Xf]b[YbX`VYb`Øh][hYb
5i ZfÄi a`UfVY]hYb`V]g`bUW`A`]hhYfbUW`h'j c``[YgdYffh`k`YfXYb"'8]Yg
ghY``hY`b]W h'bi f`Y]b`Yf\YV`]WY`6Y`Ughi b[`ZØf`XYb': U\ fYf`XUfž

XYf'ni a ; 'ØW`Y]W'hj Yf`Yhnh'k i fXYž'gcbXYfb`Ui W`ZØf`U`Y
UbXYfYb`5i hcZU\fyfž`X]Y`Ui ZXYf`5i hcVU\b`i bhYfk Y[ g`k Ufyb`"9g
]gh'ni `Yfk UfhYbž`XUgg`gc`W`Y`J cfZÄ`Y`Xi fW`i bj cfg]W'hj[ Yg`i bX
U`\_c`c`g]YfhYg': U\fyb`ni bY`a Ybž`k Ug`X]Y`J Yf`Y`fgg]W`Yf`Y]h
]bg[YgUa`h[ YZÄ`fXYh"

8]Y`Dc`nY]`VYhc`bhž`XUgg`Yg`k ]W'hj[ `]ghž`g]W`XYf'; YZU\fyb`VYk`i ggh
ni`gY]bž`X]Y`XUg': U\fyb`i bhYf`5`_c`c`Y]bZi`gg`a`]h`g]W`Vf]b[ h`G]Y
fi`Zi`U`Y`J Yf`Y`fghY]`bY`a Yf'ni`j YfUbhk`cfhi`b[ gj`c`Ya`J Yf`U`hYb
Ui`Z`XU`YXYf`bcW`gc`_Y]bY': Y`Yf`ZU`hU`Y`?cbgYei`YbnYb`UVYb
_Ubb`"5`_c`c`Ua`GhYi`Yf`]gh`b]W`h`bi`f`[YgYh`W`j`YfVchYbž
gcbXYfb`\_Ubb`Ui`W`gc`YfbghY`i`bZÄ`Y`ni`f': c`[ Y`UVYb`k`]Y`X]YgYb"

- I`bZU`i`fgUW`Y.`5`_c`c`g]YfhYf': U\fyf
- I`bZU`c`fh.`5`\*`&`nk`]gW`Yb`HØf`\_]ga`Ø`Y`i`bX`6]f`\_YbZY`X
- NY]hdi`b`_h.`B`UW`h`j`cb`A`]h`k`cW`Ui`Z`8`cb`bYfghU[
- DYfgcbYbgW`UXYb.`: U\fyf`Y]W`h`j`Yf`Yhnh
- A`UhYf]U`gW`UXYb.`; fc»Yf`HfØ`a`a`YfZY`X`i`bX
Ui`g[ Y`Ui`ZYbY`6Yhf]YVgghc`ZY
- GdYffnY]h.`5i`hcVU\b`V]g`bUW`A`]h`hYfbUW`h`[YgdYffh

9]bY`K`Ufbi`b[ `ZØf`U`Y`J`Yf`Y`fghY]`bY`a`Yf

8]Y`9fY][`b]ggY`Ui`ZXYf`5`*`&`gc`hYb`U`g`A`U`bi`b[ `VYhfUW`hYh
k`YfXYbž`k`]Y`[YZÄ`f`W`5`_c`c`Ua`GhYi`Yf`]gh`"8Yf`J`cfZU`U`h
b]W`h`bi`f`Ui`Z`hfU[`]gW`Y`K`Y]gY`XUg`@YVYb`XYg`'`&!`Ä`f][`Yb`A`UbbYg
VYY]bZi`gghž`gcbXYfb`Ui`W`XYb`J`Yf`Y`f`]b`XYf`F`Y[ `]cb`B`c`Z`Y`XYb
ghUf`\_`[YghØfh`Gc`W`Y`i`bZÄ`Y`g]bX`b]W`h`bi`f`NU`Y`b`Ui`Z`Y]bYa
6`U`h`DUd]Yfž`gcbXYfb`UVYb`fYU`Y`5i`gk`]f`\_i`b[Yb`Ui`Z`U`Y`ž`X]Y
g]W`Ui`Z`XYb`GhfU»Yb`VYk`Y[Yb"

8]Y`Dc`nY]`Yfa`i`h][`h`X]Y`?`ZYbh`]W`\_Y]hž`g]W`VY]`XYf`5`bfY]gY`ni
J`YfUbghU`hi`b[ Yb`i`bX': Y]Yfb`ghYhg`Y]bYb`g]W`YfYbž`bØW`hYfbYb
: U\fyf`ni`gi`W`Yb`c`XYf`U`hYfbUh]j`Y`HfUbgdc`fha`Ö[`]W`_Y]hYb`]b
6YhfUW`h`ni`n]Y`Yb`"8Ug`@YVYb`i`bX`X]Y`G]W`Yf`Y]h`U`Yf
J`Yf`Y`fghY]`bY`a`Yf`Ä`b[Yb`j`cb`XYb`9b`hgW`Y]Xi`b[ Yb`UVž`X]Y`k`]f
hfY`ZY`bž`i`bX`Y]XYf`[`]Vh`Yg]a`a`Yf`bcW`A`YbgW`Ybž`X]Y`X]YgY
Y]bZUW`Y`ž`UVYf`Yb`hgW`Y]XYbXY`F`Y[Y`][`bcf]YfYb"

I bZÄ`Y`Ui Z[fi bX`U`_c`c`VYX]b[hYf` : U`fZY`Yf`g]bX`Y]b
k]YXYf`\_Y`fYbXYg`DfcV`Ya` ]a` GhfU» Ybj Yf`\_Y`f`"8]Y`8Yi hgWXY
< Ui dhghY`Y`ZØf`Gi W`hZfU[Yb`Y`J`"VYf]W`hYh`fY[ Y`a` Å» ][`ØVYf`X]Y
; YZU`fYb`XYg` : U`fYbg`i bhYf`5`\_c`c`Y]bZi gg`"5i W`k`Ybb`X]Y
a`Y]ghYb`A`YbgW`Yb`X]Y`F`]g]\_Yb`_YbbYbž`g]bX`X]Y`NU`Yb`j`cb
U`\_c`c`VYX]b[ hYb`J`Yf`_Y`f`gi bZÄ`Yb`bUW`k`]Y`j`cf
VYgcf[b]gYffY[YbX`"æ` ð`f`&`\$`%`[ UV`Yg`]b`8Yi hgW`UbX`%(" -) *
I bZÄ`Yž`VY]`XYbYb`5`\_c`c`Y]bY`F`c`Y`gd]Y`hYž`k`Ug`ni`" &&
hØX`]W`Yb`I`bZÄ`Yb`ZØ`fhY`"Gc`W`Y`GhUh]gh]\_Yb`j`YfXYi`h`]W`Yb`X]Y
B`chk`YbX][`\_Y]h]j`cb`DfÅ]`Ybh]cbga`U»`bU`a`Yb`i`bX`X]Y
GYbg]V]`]g]Yfi`b[`XYf`²`ZYbh`]W`\_Y]h`ZØf`X]Y` ; YZU`fYb`XYg` : U`fYbg`
i`bhYf`9]bZi`gg]`cb`5`_c`c`cXYf`8fc[ Yb`"

J Yf`\_Y`f`gfYW`h`]W`Y`?`cbgYe`i`YbnYb

9]b`I`bZU`ž`XYf`i`bhYf`5`_c`c`Y]bZi`gg]`Yfi`fgUW`h`k`]fXž`_Ubb
k`Y]hfY]W`Yb`XY`fYW`h`]W`Y`?`cbgYe`i`YbnYb`ZØf`XYb` : U`fYf`bUW`g]W`
n]Y`Yb`"BYVYb`a`Ö[`]W`Yb` ; Y`XghfUZYb`i`bX` : U`fj`YfV`chYb`g]Y`h
XUg`GhfU»`Ybj`Yf`_Y`f`g[YgYhn`Ui`W`ghfUZfYW`h`]W`Y`A`U»`bU`a`Yb
j`cf`"6Y]`Y]bYa`"6`i`hU`\_c`c`[ Y`U`h]j`cb`\$ž`]`Dfca`]`Y`i`bX`Ø`Yf
a`ØggYb`X]Y` : U`fYf`a`]h`Ya`dZ]bX`]W`Yb`GhfUZYb`fYW`bYb`"6Y]
gW`k`YfYfYb`J`Yf`Y`hni`b[ Yb`cXYf`H`chYb`\_Ubb`X]Y`GhfUZY`bcW`
XfUgh]gW`Yf`Ui`gZU`Yb`i`bX`gc[ Uf`V]g`ni`a`Y`fYfYb`ð`fYb
: fY]`Y]hgghfUZY`ZØ`fYb`"J`Yf`_Y`f`gYI`dYfhYb`VYhcbYb`X]Y
K`]W`h][`\_Y]hž`g]W`XYf`fYW`h`]W`Yb`F`]g]\_Yb`VYk`i`ggh`ni`gY]bž`VYj`cf
a`Ub`U`\_c`c`]gW`Y` ; YhfÅb`_Y`\_cbgi`a`]Yfhi`bX`g]W`h`]bhYf`XUg
GhYi`Yf`gYhnh"

F Y]b][`i`b[`g!`i`bX`GUb]Yfi`b[`ga`U»`bU`a`Yb bUW`X`J`Yf`_Y`f`gi`bZÄ`Yb

B`UW`Y]bYa`"J`Yf`\_Y`f`gi`bZU`ž`]bgVYgcbXYfY`Y]bYf`?`c`]g]cb`a`]h
gW`k`YfYb`GW`ÅXYb`k`]Y]b`X]YgYa` : U`ž`g]bX`i`a`ZUb[`fY]W`Y
F`Y]b][`i`b[`g!`i`bX`GUb]Yfi`b[`ga`U»`bU`a`Yb`YfZc`fXYf`]W`"8]Y`?`cghYb
XUZØf`\_ØbbYb`Yf`YV`]W`gY]b`i`bX`k`YfXYb`]b`XYf`F`Y[ Y`j`cb`XYf
< UZhdZ]W`hj`Yfg]W`Yfi`b[`XYg` : U`fYfg`ØVYfbca`a`Yb`"8]Y`GhUXh
cXYf` ; Ya`Y]bXYž`X]Y`ZØf`X]Y`GhfU»`Yb]bghUbX`U`hi`b[`ni`ghÅbX][`]ghž

a i gg`Āi Z[ `YVYbZU`g`A U» bU\ a Yb`Yf[ fY]ZYbž`i a `k Y]hYfY
; YZU\ fYb`ZØf`UbXYfY`J Yf\_Y\ fghY]`bY\ a Yf`ni `j Yfa Y]XYb``8]Yg
VY]b\U`hYh`X]Y`DfØZi b[ `i bX`[ Y[ YVYbYbZU`g`F YdUfUhi f`XYf
⇒ ZfUghfi _hi fž`k ]Y`GhfU» YbVY`Yi W\hi b[ `i bX`@Y]hd`Ub_Ybž`gck]Y
X]Y`6YgY]h][ i b[ `j cb`GW\ a i hni bX`[YZ\`f`]W\Yb`6Yhf]YVgghcZZYbž
X]Y`VY]`Y]bYa `l bZU``Ui g`i: U\fnYi [ Yb`Ui g`Ui ZYb`_ØbbYb"

⇒ X]YgYa `gdYn]Y``Yb`i: U``k i fXY`X]Y`5i hcVU\ b`5\* &`bUW\`XYa
l bZU``V]g`bUW\`A]hYfbUW\h`ZØf`F Y]b][i b[g_fĀZhY`[ YgdYffhž`k Ug
nY][hž`k ]Y`k]W\h][`Y]bY`gW\ bY``Y`F YU\_h]cb`XYf`9]bgUhn\_fĀZhY`]ghž
i a `k Y]hYfYb`l bZĀ``Yb`j cfni VYi [ Yb`i bX`X]Y`9ZZ]n]Ybn`XYg
J Yf_Y\ fggmghYa g`Ui ZfYW\ hni Yf\U`hYb"

8YhU]`g

6Ygi W\Yb`G]Y`i bg`Ui Z.`X]Y!bUW\ f]W\ hYb`"bYh