: f]YXf]Wk fcXU. '%*! Å\ f][Yf'nØbXYh
: Yi Yfk Yf_`Ui Z`Gd]Y`d`Uhn` `Dc`]nY]
Yfa]hhY`h

9]b '%*! Å\ f][Yf'nØbXYhY : Yi Yfk Yf_`Ui Z]bYa `Gd]Y`d`Uhn`]b
: f]YXf]Wk fcXU" `Dc`]nY]`Yfa ]hhY`h'k Y[Yb`J Yfghc» Yg[ Y[ Yb`XUg
GdfYb[ghcZZ[YgYhm"

; YghYfb`A ]hhU[ `]b : f]YXf]Wk fcXU`]a `@UbX_fY]g;` ch\Užk Uf
ni bÅWkgh`b]Wk hg`l b[Yk Ò`b`]Wk Yg`ni `gY\Yb" ?]bXYf`gd]Y`hYb
ZfÒ\`]Wk `Ui Z`XYa `Gd]Y`d`Uhn`Ua `GWk UfnVUWk ž`U`g`d`Öhn`]Wk `Y]b
`Ui hYf`? bU``X]Y`F i \Y`ghÖfhY" 9]b '%*! Å\ f][Yf`đ [ YbX`]Wk Yf`\UhhY
Xcfh`Y]bY`6UhhYf]Y`j cb : Yi Yfk Yf\_`[YnØbXYhž`k Ug`X]Y`5bk c`bYf`]b
5`Ufa VYfY]hgWk UZhj YfgYhmhY"

8]Y`Dc`]nY]`Yf\]Y`hi a [Y\YbX``đZcfa Uh]cbYb`j cb`a Y\fyfyb
NYi [Ybž`X]Y`YbhgYhmhØVYf`XUg`J Yf\U`hYb`XYg`đ [ YbX`]Wk Yb
k Ufyb" 9g`k i fXY`gWk bY``_`Ufž`XUgg`XUg`NØbXYb`j cb : Yi Yfk Yf\_`
Ui Z]bYa `Gd]Y`d`Uhn`U`Yg`UbXYfy`U`g`j YfUbhk`cfhi b[gVYk i ggh`]gh"
8]Y`6YUa`hYb`a UWk hYb`g]Wk `i bj YfnØ[ `]Wk `Ui Z`XYb`K Y[ `ni `XYa
Cfh`XYg;` YgWk Y\Ybg`i bX`_`cbbhYb`XYb`↑ b[ Yb`A Ubb`gWk bY``
Ui gZ]bX][`a UWk Yb"

F YU_h]cb`XYf`Dc`]nY]`i bX`fYWk h`]Wk Y
? cbgYei YbnYb

8]Y`Dc`]nY]`[ f]ZZ`XYb`%\*! Å\ f][ Yb`Ui Zi bX`bU\`a `X]Y`G]hi Uh]cb
Yfbgh`đ`8Yi hgWk`UbX`g]bX`gc`Wk Y`5\_hj]`hÅhYb`c`bY`X]Y
bchk YbX][Y;` YbY\`a]][i b[`ghf]\_`hi bhYfgU[h" 8 Ug
GdfYb[ghcZZ[YgYhm`fY[ Y`h[`Ubn`_`Ufž`XUgg;` Yi Yfk Yf\_`bi`f`ni
VYgh]a`a`hYb`5b`ÄggYbž`k ]Y`XYa `G]j YghYfZYghž[ YnØbXYh`k YfXYb
XUfZ" 8]Y`Öfh]Wk Yb`6Y\ÖfXYb`\UVYb`bi`b`Y]b`J YfZU\fyb`[Y[Yb`XYb

đ b[Yb`Y]b[ Y`Y]hYh"

8 Ug`NØbXYb`j cb`G]j YghYf\_bU`Yfbž`k ]Y`Yg`cZh]b`XYf
G]j YghYfbUW`h`XYf` : U``]ghž`c`bY`X]Y`j cf[YgY`YbY` ; YbY`a] [i b [
_Ubb`ni` ; Y`XghfUZYb`ZØ`fYb`i bX`U`h`a` Y]gh`Ui W`UbXYfYb
fYW`h]W`Yb`?cbgYei YbnYb`ni f` : c`[Y``H`YcfYh]gW`_ØbbhY`XYf
đ [YbX`]W`Y`gc[ Uf`a` ]h`Y]bYa``9]bhfU[`]bg`dc`]nY`]W`Y
: Ø`fi b[ gnYi [ b]g`fYW`bYbž`k Ug`g]W`Ui Z`gY]b`ni _ØbZh][Yg`@YVYb
Ui gk]f_Yb`_ØbbhY"

2 ZZYb`h`]W`Y`G]W`Yf`Y]h`i bX`J YfUb`hk`cfhi`b[

9]b`gc`W`Yf`J`cfZU``k]fZh` : fU[ Yb`ni f`J`YfUb`hk`cfhi`b[ `VY]`XYf
Bi`hni`b[`j`cb` : Yi`Yfk`Yf`_`Ui`Z`]bgVYgcbXYfY`]b`XYf`B`A`Y
ØZYb`h]W`Yf`D`À`hnY`k]Y`Gd]Y`d`À`hnYbž`k`c`? ]bXYf`gd]Y`Yb``8]Y
; YZU`fYbž`X]Y`j`cb` : Yi`Yfk`Yf`_g`\_ØfdYfb`Ui`g[ Y`Ybž`g]bX`b]W`h`ni
i`bhYfgW`À`hnYb``I`bZ`Y`g]bX`gW`bY``dUgg]Yf`hž`i`bX`b]W`h`bi`f`XYf
NØbXYbXY`\_Ubb`VYhfc`ZYb`gY]bž`gcbXYfb`Ui`W`i`bVYhY`] [hY"

÷`XYb`a`Y]ghYb`Gh`X`hYb`i`bX` ; Ya`Y]bXYb`[ ]Vh`Yg`\_`UfY`FY[ Y`bž`X]Y
X]Y`8i`fW`ZØ`fi`b[ `j`cb` : Yi`Yfk`Yf`\_g]`YfUb`ghU`hi`b[ Yb`Ub
VYgh]a`a`hYb`C`fhYb`i`bX`ni`Z]i`YfhYb`NY]hYb`fY[ Y`b``8]Y`6Y`ØfXYb
UddY``YfYb`A`i`Z][ `Ub`X]Y`6Øf[ Yfž`j`YfUb`hk`cfhi`b[ g]c``a`]h
: Yi`Yfk`Yf`\_`i`a`ni` [ Y`Yb`i`bX`g]W`Ub`X]Y`[YgYh`]W`Yb`J`cf[UVYb`ni
U`hYb"

8]YgYf`J`cfZU``]b` : f]YXf]W`fcXU`nY][ h`Ui`W`ž`k ]Y`k]W`h][ `X]Y
5i`Zg]W`h`Xi`fW`9fk`UW`gYbY`]ghž`k`Ybb`? ]bXYf`]b`XYf`B`A`Y`j`cb
dchYbn]Y``[ YZ`A`f`]W`Yb`A`UhYf]U`]Yb`k ]Y` : Yi`Yfk`Yf`\_g]bX``Ni`XYa
]gh`Yg`k]W`h][ ž`X]Y`? ]bXYf`ØVYf`X]Y`F`]g]\_Yb`i`bX` ; YZU`fYb`j`cb
DmfchYW`b]\_`Ui`Zni`_`À`fYbž`i`a`\_`À`b`]W`Y`J`cfZ`Y`]b`Ni`\_i`bZ`ni
j`Yfa`Y]XYb``<c`Zbi`b[`V`Y]Vhž`XUgg`gc`W`Y`J`cfZ`Y`]b`W`h`bi`f
U`bXYh`k`YfXYbž`gcbXYfb`Ui`W`ni`Y]bYa`\_I`a`XYb`_Yb`ZØ`fYbž`k`Ug
X]Y`G]W`Yf`Y]h`U`Yf`6Øf[Yf`Ub[ Y`h"

8]Y`Dc`nY`]k ]fX`k`Y]hYf`Y]b`k`UW`gUa`gY]b`i`bX`Ui`W`]b`Ni`\_i`bZ`h
gc`W`Y`J`cfZ`Y`Yfbgh`bY`a`Yb``9`hYfb`i`bX`9fn]Y`i`b[gVYfYW`h][hY
g]bX`Ui`Z[Yfi`ZYbž`]fY`? ]bXYf`ØVYf`X]Y` ; YZU`fYb`j`cb` : Yi`Yfk`Yf`_

Ui Zni _`ÄfYbž`XUa]h'gc`WXY`F]g]_Yb`VYgha Ö[ `]W`j Yfa]YXYb
k YfXYb`\_ÖbbYb""8]Y` ; YgYhnY`ni a`l a [Ub[`a ]h` : Yi Yfk Yf_
YI]gh]YfYb`b]W`h`c`bY` ; fi bXž`i bX`Yg`]Y[h`Ub`^XYa`^9]bnY`bYbž
X]YgY`Yfbgh`ni`bY`a`Yb`i bX`]b`X]YgYa`G]bbY`ni`^UbXY`b`"

F YW`hY`i bX`FY[ Y`i b[Yb`ni` : Yi Yfk Yf`\_]b 8 Yi hgW`UbX

⇒ 8 Yi hgW`UbX`[]Vh`Yg`ghf]_hY`FY[ Y`i b[Yb`VYnØ[ `]W`XYg
J Yf_Ui Zg`i bX`XYf`J Yfk YbXi b[ `j cb` : Yi Yfk Yf\_g\_ÖfdYfb`"@Ui h
XYa`GdfYb[ ghcZZ[ YgYhn`XØfZYb` : Yi Yfk Yf\_g\_ÖfdYf`XYf`? UhY[cf]Y
: &ž`X]Y`ZØ`df]j UhY` : Y]Yfb`j Yfk YbXYh`k YfXYbž`bi f`Ub`VYgh]a`a`hYb
HU[Yb`[ YnØbXYh`k YfXYbž`^Ui dhg`ÄW`]W`i a`XYb`^U`fYgk YW`gY`"
8]Yg`[ ]h`U`g`GW`i hna`U»b`U`a`Yž`i a`l bZ`^Y`i bX`UbXYfY` ; YZU`fYb
ni`a`]b]a`]YfYb""8]Y`J Yfk YbXi b[`j cb` : Yi Yfk Yf_g_ÖfdYfb
Ui »Yf`U`V`X]YgYf`NY]h`]gh`]b`XYf`FY[Y`ghfUZVUf`i bX`_Ubb
fYW`h`]W`Y`? cbgYei`YbnYb`bUW`g]W`n]Y`Y`b`"

9]b`k`Y]hYfYg`k`]W`h][ Yg`FY[Y`k`Yf`\_g]bX`X]Y`DZ]W`hYb`XYf
< YfghY`^Yf`i bX`J Yf\_Äi`ZYf`j`cb` : Yi Yfk Yf`_""8]YgY`a`ØggYb
g]W`YfghY`^Ybž`XUgg`]^fY`DfcXi`_hY`XYb`XYi`hgW`Yb
G]W`Yf`Y]hgghUbXUfXg`YbhgdYfW`Yb`"6YgcbXYfg`6Yf]W`hY`j`cb
l bZ`^Yb`i bX`J Yf`Yhni b[Yb`Xi`fW`i`bgUW`[ Ya`Ä»Yb` ; YVfUi`W`
^UVYb`]b`XYf`J Yf[ Ub[ Yb`Y]h`ni`gW`ÄfZYfYb`? cbhfc`^Yb`i bX`
FY[Y`i b[ Yb`[YZØ`fh`"

2 ZZYb`h`]W`Y`G]W`Yf`Y]h`i bX` ; Ygi bX`Y]hggW`i hn

8Yf`9]bgUhn`j`cb` : Yi Yfk Yf`\_`^Uh`b]W`h`bi`f`fYW`h`]W`Y
⇒ a`d`_Uh]cbYbž`gcbXYfb`ghY`^h`Ui`W`Y]bY`< YfUi`gZcfXYfi`b[ `ZØf`X]Y
ÖZZYb`h`]W`Y`G]W`Yf`Y]h`XUf`"»XYg`^U`f`\_ca`a`h`Yg`ni`nU`^fY]W`Yb
l bZ`^Ybž`X]Y`Xi`fW`XYb` ; YVfUi`W`j`cb` : Yi Yfk Yf_g_ÖfdYfb
YbhghY`Yb`"@Ui`h`XYb`GhUh]gh]\_Yb`XYg` ; YgUa`hj`YfVUbXg`XYf
8Yi`hgW`Yb`J Yfg]W`Yfi`b[ `gk`]fhgW`UZh`fl`8J`Ł`g]bX`Yhk`U`%"\$\$\$
A`YbgW`Yb`Ub`G]j`YghYf`i`bX`]b`XYf`NY]h`i`a`XUg`bYi`Y`^U`f`^Yfi`a
Ui`Z]fi`bX`j`cb` : Yi Yfk Yf\_g\_ÖfdYfb`j`Yf`Yhnh`k`cfXYb""8]Y
^Äi`Z][ ghYb`J Yf`Yhni b[ Yb`g]bX`J YfVfYbbi b[ Yb`i bX`
5i`[ Ybj`Yf`Yhni b[ Yb""8]Y`Dc`nY]i`bX`X]Y` : Yi Yfk`Y`f`k`Y]gYb`XU`Yf`"

[a a Yf'k]YXYf'Ui Z'X]Y'; YZU\ fYb '\]b'i bX'UddY''YfYb'Ub'Y]bY
j YfUbhk cfhi b[gj c''Y'Bi hni b['j cb': Yi Yfk Yf_g_ÖfdYfb"

F YU_h]cbYb']b'XYf'^2 ZZYbh']W\ _Y]h

⇒ XYf'^2 ZZYbh']W\ _Y]h'gcf[h'XYf'i bgUW\ [Ya Å» Y' l a [Ub['a]h
: Yi Yfk Yf_Yb'\Åi Z['ZØf'_cbhfcj YfgY'8]g_i gg]cbYb''J]Y'Y'6Øf[Yf
ZcfXYfb'ghfYb[YfY'A U» bU\ a Yb'i bX'?cbhfc''Ybž'i a 'X]Y'G]W\ Yf\Y]h
ni 'Yf\Ö\Yb''J cf'U''Ya ']b'i fVUbYb'; YV]YhYb']gh'XYf'9]bgUhn'j cb
: Yi Yfk Yf_']b'XYf'BÅ\Y'j cb'K c\ b\Åi gYfb'cXYf'Gd]Y'd'ÅhnYb
\Åi Z['Y]b'GhfY]hdi b_h''5bk c\ bYf'VYf]W\ hYb'ØVYf
@Åfa VY'Ågh][i b['i bX'XUg'Yf\Ö\hY'F]g]_c'j cb'6fÅbXYb''

I a 'XYb'j YfgW\]YXYbYb'Gcf[Yb'FYW\bi b['ni 'hfU[Ybž'V]YhYb
Y]b][Y'?ca a i bYb'a]hh'Yfk Y]'Y'gdYn]Y''Y': Yi Yfk Yf_Y'Ub
ÖZZYbh']W\ Yb'D'ÅhnYb'Ubž'i a 'Y]bY'_cbhfc''YfhY'i bX'g]W\ YfY
9fZU\fi b['ZØf'X]Y'6Øf[Yf'ni ' [Yk Å\ f'Y]ghYb''6Y]'gc'W\ Yb
J YfUbgU'hi b[Yb'k]fX'b']W\ h'bi f'Ui Z'G]W\ Yf\Y]h[YUW\ hYhž'gcbXYfb
Ui W\ 'Ui ZY]bY'Ub[Ya YggYbY': Y]Yf_i 'hi f"

GhUh]gh]_Yb'ni f'Bi hni b['j cb': Yi Yfk Yf_

8]Y'6Y''YVh\Y]h'j cb': Yi Yfk Yf_Yb']b'8Yi hgW\ 'UbX']gh
i b[YVfcW\ Ybž'VYgcbXYfg'fi bX'i a 'G]j YghYf''GW\ Åhni b[Yb
ni Zc` [Y' [YVYb'X]Y'8Yi hgW\ Yb'Å\ f']W\ 'Yhk U'% \$'A]''cbYb'9i fc
ZØf': Yi Yfk Yf_g_ÖfdYf'Ui g''Hfchn'XYf'\c\Yb'J Yf_Ui ZgnU\Yb' []Vh
Yg'YXcW\ 'Y]bYb'k UW\ gYbXYb'HfYbX'\]b'ni 'U'hYfbUh]j Yb
: Y]Yfa Yh\cXYbž'k]Y'ni a '6Y]gd]Y''@]W\ hg\ck g'cXYf
A i g]_ZYgh]j U'g''8]YgY'5'hYfbUh]j Yb'j YfgdfYW\ Yb'b']W\ h'bi f'a Y\ f
G]W\ Yf\Y]hž'gcbXYfb'g]bX'Ui W\ 'i a k Y'hžFYi bX']W\ Yf"

9]bY'Ghi X]Yb'fY]\Y'XYg'J YfVUbXg'8Yi hgW\ Yf
: Yi Yfk Yf_g_ccfX]bUhc'fYb'nY][hž'XUgg'X]Y'5_nYdhUbn'ZØf'df]j UhY
: Yi Yfk Yf_Yf'Ub': Y]YfhU[Yb'k]Y'G]j YghYf']a '5'' [Ya Y]bYb'\cW\
]ghž'UVYf'XUg'6Yk i gghgY]b'ZØf'X]Y'F]g]_Yb'YVYbZU''g'ni b]a a h"
⇒ a Yf'a Y\ f'A YbgW\ Yb'gYhnYb'g]W\ 'U_h]j 'ZØf'Y]bY
j YfUbhk cfhi b[gj c''Y'Bi hni b['Y]b'i bX'gYbg]V]']g]YfYb'UbXYfY'ZØf
X]Y'; YZU\ fYb''

8]Y'8]g_i gg]cb'i a 'XYb'l a [Ub['a]h: Yi Yfk Yf_'V`Y]Vh'U`gc 'Ui W
]b'XYb'_ca a YbXYb`đ\fyb'fY`Yj Ubhi bX`k ]fX`Xi fW
[YgY`gW UZh`]WY`J YfAbXYfi b[ Ybž`k]Y`VY]gd]Y`gk Y]gY`XUg
[Ygh]Y[YbY`l a k Y`hVYk i gghgY]bž`a a Yf`k]YXYf`bYi `VY`Yi W hYh"

8 YhU]`g

6Ygi W Yb`G]Y`i bg`Ui Z. `b!U["XY