

⇒ a a Yf'a Y\ f' l G! 6Øf[ Yfa Y]ghYf'k c`Yb']b  
6]hWc]b' VYnU\`h'k YfXYb'`BYk g

9]bY'k UWgYbXY'NU\`j cb'6Øf[ Yfa Y]ghYfb']b' GhAXhYb']b'XYb  
l G5`UhiYf\_`ÀfhžXUgg'g]Y'a ]h'6]hWc]b' VYnU\`h'k YfXYb  
a ÒW hYb"8Yf'6Øf[ Yfa Y]ghYf'j cb'A ]Ua ]'gU[ hYž'Yf'k YfXY  
gY]b' [ YgUa hYg'; Y\U'h']b'XYf'? fmdhc k À\fi b[ 'VYn]Y\Ybž'nk Y]  
k Y]hYfY'6Øf[ Yfa Y]ghYf'k YfXYb']\fY'; Y\U'hggWXYW\_g']b  
6]hWc]b' i a k UbXY'b' i bX'XYf' [ Yk À\`hY'6Øf[ Yfa Y]ghYf'j cb  
BYk 'Mcf\_7]hmik ]fX'gY]bY'YfghYb'XfY]; Y\U'hggWXYW\_g']b  
' fmdhc' bY\`a Yb" A Y\ f'6Øf[ Yfa Y]ghYf'j cb' l G! GhAXhYb  
j Yf'Ub[ Yb'Y]bY'NU\`i b[ 'b'6]hWc]b' ⇒ a a Yf'a Y\ f  
6Øf[ Yfa Y]ghYf']b' l G! GhAXhYb' k c`Yb'a ]h'6]hWc]b' VYnU\`h  
k YfXYb" Ni a 'NY]hdi b\_hXYg'GWfY]VYbg'\UVYb'a ]bXYghYbg  
XfY]'6Øf[ Yfa Y]ghYf'i bX'Y]b' [ Yk À\`hYf'6Øf[ Yfa Y]ghYf  
[ YgU[ hž'XUgg'g]Y']\fY' bÀWghYb'; Y\U'hggWXYW\_g']b'6]hWc]b  
UbbY\`a Yb'k YfXYb"8Yf' / Ua d^Y`d/

9]bY`k UW`gYbXY`NU`j`c b`6Øf[ Yfa Y]ghYfb`]b`Gh`XhYb`]b  
XYb`i G5`U`h`Yf`\_`Åfhž`XUgg`g]Y`a` ]h`6]hW`]b`VYnU`h`k`YfXYb  
a`ØW`hYb`"8Yf`6Øf[ Yfa Y]ghYf`j`c b`A`]Ua` ]`gU[ hYž`Yf`k`YfXY  
gY]b`[ YgUa`hYg`; Y`U`h`]b`XYf`? fmdhc k`Å`fi`b[ `VYn]Y`Ybž  
nk`Y`]k`Y]hYfY`6Øf[ Yfa Y]ghYf`k`YfXYb`]`fY`; Y`U`hggW`YW`g  
]b`6]hW`]b`i`a`k`UbXY`b`i`bX`XYf`[ Yk`Å`hY`6Øf[ Yfa Y]ghYf  
j`c b`BYk`Mcf`\_`7]hm`k`]fX`gY]bY`YfghYb`XfY`]; Y`U`hggW`YW`g  
]b`? fmdhc`bY`a`Yb`"

A`Y`f`6Øf[ Yfa Y]ghYf`j`c b`i`G!Gh`XhYb  
j`Yf`Ub[ Yb`Y]bY`NU`i`b[`]b`6]hW`]b

⇒ a`Yf`a`Y`f`6Øf[ Yfa Y]ghYf`]b`i`G!Gh`XhYb`k`c`Yb`a` ]h`6]hW`]b  
VYnU`h`k`YfXYb`"Ni`a`i`NY]hdi`b`h`XYg`GW`fY]VYbg`U`VYb  
a`]bXYghYbg`XfY`]6Øf[ Yfa Y]ghYf`i`bX`Y]b`[ Yk`Å`hYf`6Øf[ Yfa Y]ghYf  
[ YgU[ hž`XUgg`g]Y`]fY`b`ÅW`ghYb`; Y`U`hggW`YW`g`]b`6]hW`]b  
UbbY`a`Yb`k`YfXYb`"

8Yf`YfghY`6Øf[ Yfa Y]ghYfž`XYf`gU[ hž`XUgg`Yf`]b`6]hW`]b`VYnU`h`  
k`]fXž`]gh`XYf`6Øf[ Yfa Y]ghYf`j`c b`A`]Ua` ]ž: `cf]XUž: fUbW]g  
Gi`UfYnž`XYf`Ua`i`8]YbghU[`]Yhk`]hYfh`U`h`⇒W`k`YfXY`a`Y]bYb  
b`ÅW`ghYb`; Y`U`hggW`YW`ni`%\$`\$i``]b`6]hW`]b`bY`a`Yb`"

5`g`FYU`h]cb`Ui`Z`Gi`UfYn`Hk`YYhž`XYf`[ Yk`Å`hYf`6Øf[ Yfa Y]ghYf  
j`c b`BYk`Mcf`\_`7]hmž`9f]W5XUa`gž`hk`]hYfhYž`XUgg`Yf`VY`]gY]bYa  
5a`hgUbhf]h`U`g`6Øf[ Yfa Y]ghYf`j`c b`B`M7`gY]bY`YfghYb`XfY`  
; Y`U`hggW`YW`g`]b`6]hW`]b`UbbY`a`Yb`k`]fX`"

B`UW`5XUa`g`Hk`YYh`gU[ hY`Gi`UfYn`]b`Y]bYa`i`hYfj`]Yk`a`]h: c`l  
6i`g]bYggž`XUgg`Yf`b]W`h`bi`f`gY]bYb`b`ÅW`ghYb`; Y`U`hggW`YW`\_]b  
6]hW`]b`UbbY`a`Yb`k`]fXž`gcbXYfb`gY]b`[ YgUa`hYg`; Y`U`h`Y]bn]Y`Yb  
k`]fX`6H7`"8Yf`6Øf[ Yfa Y]ghYf`j`c b`A`]Ua` ]`ghY`hY`ZYghž`XUgg`XYf`7`€  
XYf`GhUXh`XYf`YfghY`A`]hUfVY]hYf`k`Ufž`XYf`hUhg`ÅW`]W`Y]bYb  
Dfc`nYb`hgU`h`gY]bYg`; Y`U`h`g`]b`6]hW`]b`bU`a`ž`i`bX`ZØ`fhY`Ui`g.

⇒W`k`YfXY`5b[ YghY`hYf`Bi`a`a`Yf`nk`Y`]`⇒W`k`YfXY`%\$`\$i`

a Y]bYg; Y\U`hg`]b`6]hWc]b`UbbY\ a Yb"

K ]f`k YfXYb`Yg`g]WYf`]W`b]Ya UbXYa `Ui Znk ]b[ Yb žVYhcbhY`XYf  
6Øf[ Yfa Y]ghYf" 9g`k ]fX`j Ò`][ `cdh]cbU`gY]b` `K ]f`a ÒW`hYbž`XUgg  
i bgYfY`A ]hUfVY]hYf`X]YgY`A Ò[ `]W`\_Y]h`\UVYbž`UVYf`Yg`k ]fX  
g]WYf`]W`b]W`hg`gY]bž`k Ug`k ]f`]\bYb`Ui Znk ]b[ Yb`k YfXYbž`XU`k ]f  
j YfghY\Ybž`XUgg`Y]bY`gc`W`Y`9bhgW`Y]Xi b[ `Y]bY`dYfgÒb`]W`Y  
9bhgW`Y]Xi b[ `]ghž`X]Y`g]Y`hfYZZYb`a ØggYbž`k Ybb`g]Y`k c`Yb" `i a  
Yg`ni `gW`UZZYb"

Gi UfYn`k i fXY`\_Øfn`]W`U`g`6Øf[ Yfa Y]ghYf`j cb`A ]Ua ]  
k ]YXYf[ Yk À`h"9f`\Uh`j Yfgi W`hž`gY]bY`GhUXh`]b`X]Y`  
**? fmd hc \_Ud ]hU`XYf`K Y`h"**

...

Nk Y]`k Y]hYfY`6Øf[ Yfa Y]ghYf`\UVYb`Yf`\_`Àfhž`XUgg`g]Y`a ]h`6]hWc]b  
VYnU\`h`k YfXYb`k c`Yb"

6Øf[ Yfa Y]ghYf`Gw`hh`7cb[ Yf`XYf`GhUXh`\_JW`\_gcbž`HBž`XYf`Ui W`  
j Yfgi W`hž`gY]bY`GhUXh`ni `VUi Yb`**Y]b`6]hWc]b!** < i Vž`hk ]hYfhy`Ua  
8cbbYfghU[ .

K À`fYbX`XUg`ghUUh`]W`Y` ; YgYhn`XYf`GhUXh`\_JW`\_gcbž`HBž  
j YfV]YhYhž`a ]W` `]b`6]hWc]b`ni `VYnU\`Ybž`k YfXY`]W`XYa  
6Y]gd]Y`Zc`[ Yb`ØA ]Ua ]`A Umc`fQ: fUbW]g`Gi ½fYn`/ `ØM7  
A Umc`f!Y`YWhQ9f]W5XUa g`i bX`k UbXY`Y`a Y]bYb`b`ÀW`ghYb  
; Y\U`hggW`YW`\_gc`Zc`fh`]b`6]hWc]b`i a "

9]b`k Y]hYfYf`6Øf[ Yfa Y]ghYfž`XYf`XUfUb`]bhYfYgg]Yfh`]ghž`]b`6]hWc]b  
VYnU\`h`ni `k YfXYbž`]gh`XYf`6Øf[ Yfa Y]ghYf`j cb`HUa dUž: `cf]XU"  
5a `: fY]hU[ `VYf]W`hYhY`K HGDž`Y]b`a ]h`76G`j YfVi bXYbYf

: YfbgY\gYbXYfž'XUgg'HUa dU'j Yfgi W\hž'X]Y'8 fY\gW\Y]VY'ZØf  
?fmdhc k À\fi b[ Yb'ni 'gY]bž'i bX'X]Y'6Øf[ Yfa Y]ghYf]b'XYf'GhUXh'k ]`  
VYk Y]gYbž'XUgg'g]Y'5`! ð ]gh"

K À\fYbX'XYg'6]hWc]b!'i bX'6`cW\_W\U]b!; ]dZY`g'Ua ' : fY]hU[ ' ]b  
HUa dU'VfUW\hY'6Øf[ Yfa Y]ghYf]b' ðbY'7Ughcf'X]Y' ðXY'Ui Zž ]\fY  
; Y\U'hggW\YW\_g ]b'6]hWc]b'ni 'Yf\U'hYb''9]bY'GdfYW\Yf]b'XYg  
6Øf[ Yfa Y]ghYf]gž'@Ui fYb'F cnm'Už'gU[ hY'XUbbž'XYf'6Øf[ Yfa Y]ghYf  
\UVY'ni [ Ygh]a a hž'nk Y]; Y\U'hggW\YW\_g'Ubni bY\ a Yb'6H7" G]Y  
]gh'g]W\ 'YXcW\ 'b]W\h'g]W\Yfž'k ]Y'Yg' [ YbUi 'dUgg]YfYb'k ]fX'' 9g  
\_Ubb'gY]bž'XUgg'g]Y' ]b'fY[ i 'ÀfYb'8c`Uf'VYnU\`h'k ]fX'i bX'XUbb  
gcZcfh'i]b'6]hWc]b' ]bj Ygh]Yfh ž'VYa Yf\_hY'XYf'GdfYW\Yf"

; `Ui VYb'G]Yž'XUgg'6Øf[ Yfa Y]ghYf'j cb' l G!GhÀXhYb'a ]h  
6]hWc]b' VYnU\`h'k YfXYb'gc`hYb'3@UggYb'G]Y'Yg'i bg'ja  
?ca a YbhUfVYfY]W\ 'i bhYb'k ]ggYb"

6]`XbUW\k Y]gY. 'G\i hYfghcW\_ž'D]l UVUmž'K ]\_]`7ca a cbg

fØ bWh]cbfXž'gž']XŁ'o'j Uf'`gž'Z'g'1 'X"[ Yh9`Ya Ybhg6mHU[ BUa YfgŁQ\$Q'  
]ZfK"[ Yh9`Ya Ybh6m`Xf]XŁŁ'fYhi fb/'`g'1 'X"WfYUhY9`Ya YbhfgŁ/'`g"]X'1  
]X/'`g"gfW\ " \hhdg. #WcbbYWh"ZUW\Vcc\_"bYh#YbSl G#gX\_"`g. l ZVa `1 %/  
j Yfg]cb1 j ' "&"/Z'g"dUfYbhBcXY"]bgYfh6YZcfYf'gž'Z'gŁ/'qfXcW a Ybhž  
fgWf]dhfž'fZUW\Vcc\_!`ggX\_fŁŁ/

8YhU]`g

6Ygi W\Yb'G]Y'i bg'Ui Z. '\_fmdhc!bYk g"Uh