

Dc`nY]`gi W\ h`Xf]b[ YbX`bUW\ `j Yfa ]gghYa  
` %! ž\ f][ Yb `]b`GhfU`gi bX

` %! ž\ f][ Yf`l Xc`6YfhUgW\i g`k ]fX`gY]h`A ]h`k cW\ UVYbX`]b  
GhfU`gi bX`j Yfa ]ggh"Dc`nY]`V]h`h`Y`h`i a `< ]b`k`Y]gY`ni`f`Gi`W\Y`"

J Yfa ]gghYbZÀ`Y`i bX`] \ fY`5i gk ]f`\_i b[ Yb`Ui Z  
X]Y` ; Ya Y]bgW\ UZh

ž`GhfU`gi bX`gcf[ h`Y]b`YfbYi h`j Yfa ]gghYf` %! ž\ f][ Yf`ZØf  
5i ZfY[ i b[ `]b`XYf` ; Ya Y]bgXY`"l Xc`6YfhUgW\i g`k ]fX`gY]h  
A ]h`k cW\ UVYbX`Ui g`XYa `?fUb`\_Yb`Ui g`K`Ygh`j Yfa ]gghž`bUW\XYa  
Yf`Xcfh`[ Y[ Yb`&\$"() `l ` \ f`j YfgW\k`i bXYb`]gh`"8]Y`\_cbh]bi ]Yf`]W\Yb  
FØW\_a`Y`Xi b[ Yb`ØVYf`gY]bY`Gi`W\Y`k`YfZYb`Y]b`@]W\h`Ui`ZX]Y  
<YfUi`gZcfXYfi b[ Yb`i bX`Gcf[ Ybž`X]Y`gc`W\Y` : À`Y`ZØf`X]Y  
 ; Ya Y]bgW\ UZh`a ]h`ig]W\`Vf]b[ Yb`"

8]Y`Xf]b[ YbXY`@U[ Y`XYg`J Yfa ]gghYb

@Ui`h`Dc`nY]`]gh`XYf`j`Yfa ]gghY`A`Ubb`Yhk`U`%ž+\$`A`YhYf`[`fc»ž  
gW\`Ub`\_`a`]h`Ub[`Ybž`ni`Y]bYa`NcdZ[`YVi`bXYbYb`<`UUFYb`i`bX`hfi`[  
ni`Ymh`Y]bYb`gW\k`UfnYb`<`ccX]Y`gck`]Y`Y]bY`[`fUi`Y`<`cgY`"9f`]gh  
Xf]b[`YbX`Ui`Z`a`YX]n]b]gW\Y`<`]Z`Y`Ub[`Yk`]YgYbž`k`Ug`X]Y  
8f]b[`]W\`\_Y]h`XYf`Gi`W\Y`i`a`gc`[`fØ»Yf`a`UW\h`"8]YgY`5gdY`\_hY  
a`UW\Yb`XYi`h`]W\ž`k`]Y`k`]W\h][`XUg`fYW\mY]h][`Y`9]b[`fY]ZYb`XYf  
6Y\ØfXYb`i`bX`XYf` ; Ya Y]bgW\ UZh`]gh`"

9fZc`[ `cgYg` : U\ bXi b[ gj YfZU\ fYb

8]Y`Dc`nY]`GhfU`gi bX`\Uhi`a`ZUb[`fY]W\Y` : U\ bXi b[ ga`U»bU\`a`Yb  
Y]b[`Y`Y]h`Yhž`Y]bgW\`Y»`]W\`XYg`9]bgUhnYg`Y]bYg` : À`fhYb`li`bXYg`"

Hfc hn'U`Yf'6Ya Ø\i b[ Yb'V`]YV'X]Y'Gi WXY'V]g\Yf'YfZc`[ `cg"8]Yg  
k ]fZi: fU[ Yb'ØVYf'X]Y'9ZY\_h]j ]hÅh]j cb'Gi W a U» bU\ a Yb' ]b  
XYfUfh][ Y'G]hi Uh]cbYb'Ui Zi bX'nY][ h'X]Y'6Y'UghVUf\_Y]h'XYf  
Dc`]nY]\_fÅZhYž'X]Y'cZhi bhYf'\c\Ya '8fi W\_ghY\Yb"

## 9]b'VYfY]hg'[ Ya Y`XYhYf'J Yfa ]gghYf

⇒hYfYggUbhYfk Y]gY'k i fXY' l Xc'6YfhUgW i g'VYfY]hg'Ua  
A ]h h k cW j cfa ]h h U[ 'j Yfa ]ggh[ Ya Y`XYhž'hUi W hY'YXcW'Ua '5VYbX  
gY'VghghÅbX][ 'VY]XYf'Dc`]nY]'Ui Ž'k Ug'ni 'Y]bYf'9]bghY''i b[ 'XYf  
: U\ bXi b[ ga U» bU\ a Yb'ZØ\fhY""8]YgY'K YbXi b[ 'j YfXYi h]W h'X]Y  
i b] c f\YfgY\ VUfYb'9b h k ]W\_ 'i b[ Ybž'X]Y' ]b'J Yfa ]gghYbZÅ`Yb  
Ui ZhfYhYb'\_ØbbYb'i bX'X]Y'ni gÅh n]W X'Y' l bg]W X Y f\Y]h'gW UZZYb"

## ; Ya Y]bgUa Y'J YfUbhk cfhi b[ 'ZØf'X]Y'Gi WXY

⇒a ' : c\_i g'XYf'U\_hi Y`Yb'Gi WXY'ghY'h'Ui W'X]Y'A ]h k ]f\_i b[ 'XYf  
² ZYb h]W \_Y]h'8]Y'Dc`]nY]'V]h h Y h'X]Y'6Yj Ò`\_Yfi b[ 'i a '<]b k Y]gYž  
X]Y'ni f'5i Z]bXi b[ 'XYg'J Yfa ]gghYb'VY]h fU[ Yb'\_ØbbhYb""8]YgY'5fh  
XYf'Ni gUa a YbUfVY]h'ink ]gW X Y b'6Øf[ Yfb'i bX'Dc`]nY]'nY][ hž'k ]Y  
k ]W h][ ' [ Ya Y]bgW UZh]W X Y g'<UbX Y 'b' ]b' B c h g]h i Uh]cbYb' ]gh"  
⇒Zcfa Uh]cbYb'\_ØbbYb'X]fY\_h]a 'Dc`]nY]\Ui dhfYj ]Yf'GhU'gi bX  
i bhYf'XYf'HY'YZcbbi a a Yf'\$' , ' %& , - \$\$'cXYf'cb`]bY'Y]b[ YfY]W h  
k YfXYb"

## : Un]h. '6YXYi hi b[ 'j cb'; Ya Y]bgW UZh'i bX Ni gUa a YbUfVY]h

8]Y'Gi WXY'bUW' l Xc'6YfhUgW i g'Yf]bbYfh'i bg'Ub'X]Y  
B c h k Y b X][ \_Y]hž'U`g; Ya Y]bgW UZh'ZØfY]bUbXYf'XU'ni 'gY]b"  
J Yfa ]gghYbZÅ`Y'g]bX'b]W h'bi f'Dc`]nY]gUW X Y ' 'g]Y'VYhfYZYb'i bg  
U`Y""8]Y' l bhYfghØhni b[ 'Xi fW'X]Y'6Øf[ Yf'i bX'X]Y'K ]f\_gUa \_Y]h  
XYf'Dc`]nY]'g]bX'Yb h g W X]Y]X Y b X ž'i a 'j Yfa ]gghY'DYfgcbYb'gW bY''ni  
Z]bXYb'i bX'dchYbn]Y''@VYb g f Y h Y b X Y g'ni 'VYk ]f\_Yb"" ⇒Y]bYf'NY]hž  
]b'XYf'gc'W X Y 'J c f Z Å`Y'ni bY\ a Ybž' ]ghYg'YggYbn]Y''ž'XUgg'k ]f  
ni gUa a YbUfVY]hYb'i bX'Y]bUbXYf'\Y'ZYb"

B 5;

8 YhU]g

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