

I b[Yk Ò\b`]Wk Yf'5i hc[fUa a k i bgWk .
8Uj]Y'GY`_Y'i bX'gY]b`_i f]cgYg'5b[YVch

8Uj]Y'GY`_Y'Vch'gY]bYa`9i !?c`Y[Yb'G]XbYm: f]YXY`) \$\$
9i fc'ZØf'5i hc[fUa a Y"9]b'g_i ff]Yf'9]bV`W_`b`]\fY
[Ya Y]bgUa Y'NY]h'VY]'<Yfh\U'6G7"

⇒ : i » VU`` []VhYg'b]Wk h'bi f'Gd]Y'nØ[Y'i bX'Hc fYž'gcbXYfb`Ui Wk
_i f]cgY` ; YgWk]Wk hYbž'X]Y'XUg` ; YgWkY\Yb`Ui Z'XYa`D'Uhn`i a gc
i bhYf\U'hgUa Yf'a UWkYb"8Uj]Y'GY`_Yž'VY_Ubbh'U'g'GhØfa Yf'XYg
<Ua Vi f[Yf'GJ ž'\Uh'Øb[gh'ZØf'5i ZgY\Yb`[Ygcf[hž'U'g'Y]b
Y\Ya U`][Yf'?c`Y[Y'Y]bY'Ua ØgUbhY'5bY_XchY'Ui g'XYf
[Ya Y]bgUa Yb'NY]h'VY]'<Yfh\U'6G7'YfnÅ\`hY"

G]XbYm: f]YXYž'Y]b`Y\Ya U`][Yf'i &\$!BUh]cbU'gd]Y`Yfž'XYf
a]hYfk Y]Y'Y]bY'VYUWk h]Wk Y` : Ub[Ya Y]bXY`j cb`ØVYf'Y]bYf
A]`]cb` : c`ck Yfb`Ui Z'HK]hWk` \Uhž'hY]`hY`k Å\ fYbX'Y]bYg
@j YghfYUa g'Y]bY'i b[Yk Ò\b`]Wk Y'6]hY'GY`_Yg"8Yf'<GJ!Gd]Y`Yfž
XYf'V]g'Ub[`]a a Yf\]b'gWkcb`]b`nk Y]'@[Ugd]Y`Yb'ZØf'XYb
<Ua Vi f[Yf'J YfY]b`ni a`9]bgUhn`_Ua ž'\ÅhhY` : f]YXY`Ui h'Y][YbYf
5i ggU[Y`) \$\$'9i fc`[YVchYbž'i a`5i hc[fUa a Y'ZØf`]\b`ni
i bhYfgWk fY]VYb" : Øf` : f]YXY`k Uf'X]YgYf'6YhfU[`gY]bYfnY]h'Y]bY
UbgY\b`]Wk Y'Gi a a Yž'XcWk`YhnhYbX`]Wk`Y\bhY`Yf'XUg'5b[YVch'UV"
⇒Wk`a i gghY`U'Ui Wk`a Y]bY'Y][YbYb`i bhYfgWk fY]VYb`i bX'XUg`k Uf
gWkcb`ni`j]Y` ž'Yf`_`ÅfhY`Yf" A Ub`_ØbbhY`a Y]bYbž'XUgg'XUg'ZØf
GY`_Y'Y]b'NY]Wk Yb'gY]b`_ØbbhYž'k]Y'gY\ f'Yf'XYb
5i hc[fUa a gWk fY]VUi Zk UbX'hUhgÅWk`]Wk`gWk Yi h"

? i f]cgYg'Ui g'XYf'J Yf[Ub[Yb\Y]h

8]Y` ; YgWk]Wk hYb`i a`8Uj]Y'GY`_Y'i bX'gY]bYb`Y\Ya U`][Yb
A]hgd]Y`Yf'nY][Ybž'XUgg'XYf'8fi W_`i bX'X]Y'9fk Ufhi b[Yb`]a

DfcZ]Z » VU``cZhiUi W`ni`g_i ff]Yb`G]hi Uh]cbYb`ZØ\fyb`_ÖbbYb"
GY`_YžXYf`&\$%+`ZØf`Y]bY`5V`ÖgY`j cb`UW`hiA`j`]cbYb`9i fc`j cb
@Y]dn][`bUW`6Yf`]b`k`YW`gY`hYž`UhhY`]b`gY]bYf`NY]h`VY]`<Yfh\U
6G7ž`k c`Yf`%&`*`Gd]Y`Y`UVgc`j`]YfhYž]a`a`Yf`k`]YXYf`a`]h`XYb
<YfUi`gZcfXYfi`b[`Yb`i`a`[`Y`YbX`5i`hc[`fUa`a`Y`i`a`ni`[`Y`Yb`"
K`Ä`fYbX`Yf`i`bX`:`f]YXY`g]W`nk`Uf`b]Y`Ui`ZXYa`D`Uhm`VY[`Y[`bYhYbž
\Uh]g]W`:`f]YXY`XYbbcW`Ub`X]YgY`VYgcbXYfY`6Y[`YVYb`Y]h
Yf]bbYfhž`X]Y`cZYbVUf`cZhi`ni`f`GdfUW`Y`_ca`a`h"

8]Y`5bY`_XchY`\Uh]gc[`Uf`DUfU``Y`Yb`ni`Y]bYf`UbXYfYb`gdYn]Y``Yb
9d]gcXYž`VY]`XYf`GY`_Y`Y]b`Hf]_ch`bUW`Y]bYa`Yb`hÄi`gW`YbXYb
8YfVm[`Y[`Yb`i`b]cb`6Yf`]b`]bg`Di`V`_]i`a`k`UfZ`b`i`f`i`a`Yg
ni`fØW_[`YgW`a`]ggYb`ni`VY`_ca`a`Yb`"Gc`W`Y`F`ØW`a`Y`Xi`b[`j`cb
:`Ubg`Ä`ggh]g]W`bi`f`gW`k`Yf`U`g`Ni`gh]a`a`i`b[`]b`hYfd`fYh]YfYb`i`bX
_Öbb`hY`Ub`GY`_Yg`Dcdi`Uf]h`Ä`h]b`6Yf`]b`[`Ynk`Y]ZY`h`\UVYb`"8]Yg
nY][`hž`XUgg`b]W`h`bi`f`Hc`fYž`gcbXYfb`Ui`W`X]Y`h`hYfU`h]cb`a`]h`XYb
:`Ubg`Y]bY`k`]W`h][`Y`F`c``Y`]a`:`i`»VU``gd]Y`Yb`"

8]Y`XYfnY]h][`Y`G]hi`Uh]cb`j`cb`8Uj`]Y`GY`_Y

<Yi`hY`gd]Y`h`8Uj`]Y`GY`_Y`ZØf`XYb`<Ua`Vi`f[`Yf`GJ`ž`bUW`XYa`Yf
UV`ÖgY`ZY]j`ca`"%"`:`7`?`Ö`b`k`YW`gY`hY`"Hf`ch`XYf`Ub`ZÄb[`]W`Yb
GW`k`]Yf][`_Y]hYb`\Uh`Yf`g]W`gW`bY``]b`XUg`HYUa`]b`hY[`f]Yfh`"h
gY]bYb`YfghYb`9]bg`Ä`hYb`nY][`hY`Yf`g]W`VYa`Ø`h`i`bX`_Ua`gc[`Uf`]a
8:`6!Dc`_U`ni`Y]bYa`Hc`fž`VY]`XYa`Yf`ni`a`".`\$`[`Y[`Yb`A`YddYb`hfUZ`
8]YgY`@Y]ghi`b[`Yb`[`YZU`Yb`XYb`<GJ`!5b`\Äb[`Yfbž`X]Y`]b`a`]h]`]Y`
6Y[`Y]ghYfi`b[`]i`b`hYfgh`Ø`hYb`"9g`gW`Y]b`hž`U`g`cV`GY`_Y`]b`<Ua`Vi`f[
Y]bYb`BYi`ghUfh`k`U[`h`i`bX`X]Y`A`Ö[`]W`_Y]h`gi`W`hž`gY]bY`?Uff]YfY
k`]YXYf`Ui`Z`?i`fg`ni`Vf]b[`Yb`"

8]Y`:`Ubg`gW`Ä`hYb`gY]bYb`?cb`hU`_h`ni`]b`Ybž`XYbb`Yf`b]a`a`h]g]W
NY]hž`i`a`5i`hc[`fUa`a`Y`ni`gW`fY]VYbž`Ä`ggh]g]W`a`]h`XYb
5b`\Äb[`Yfb`UV]W`hYb`i`bX`ZØ`fh`XUg`;`Ygdf`ÄW`a`]h`\bYb`"Gc`W`Y
?`Äb[`Y`g]bX`k`]W`h][`ZØf`X]Y`6]bXi`b[`]nk`]gW`Yb`Gd]Y`Yfb`i`bX`:`Ubg
i`bX`VY`hcbYb`XYb`a`YbgW`]W`Yb`5gdY`_h]a`DfcZ]gdc`fh`8]Y
?cb`_i`ffYb`ni]a`:`i`»VU``]gh[`fc`ž`UVYf`X]Y`:`Ä`][`_Y]hž`g]W`]a
5i`ghUi`gW`a`]h`XYb`5b`\Äb[`Yfb`ni`nY][`Ybž`_Ubb`Yb`hgW`Y]XYbX
gY]bž`j`cf`U`Ya`k`Ybb`a`Ub`a`]hY]bYf`ZFU[`]Yb`:`Ub`VUg]g

_cbZfcbh]Yfh'k]fXž'k]Y'Yg'Ua '9bXY'a]h'GY`_Y`VY]'<Yfh\U`XYf': U`
k Uf"

9]bg]W h. '9]b ` \ i a c f j c ``Yf'6`]W_`Ui Z`XYb
: i » VU``

⇒ a : i » VU``ZU`Yb`b]W h'bi f'HcfYž'gcbXYfb'Ui W`GÀhnYž'X]Y`]b
9f]bbYfi b[`V`Y]VYb"8]YgY'gdYn]Y`Yb`A ca YbhY'i bX'5bY_XchYb
hfU[Yb`ni f'@YVYbX][_Y]h'XYg'Gdcfhg'VY]'i bX`nY][Ybž'XUgg'Ui W
DfcZ]g'cZh'ib]W h'Yfbgh'[Ybca a Yb`k YfXYb`k c``Yb`i bX'XYb`<i a c f
]b`]\fYf'?Uff]YfY`b]W h'j Yf`]YfYb`gc``hYb"8Uj]Y`GY`_Y`a U[`Y]bY
]bhYfYggUbhY':][i f`Ui Z`XYa `D`Uhn'gY]bž'UVYf'gY]b`i a [Ub[`a]h'XYb
<YfUi gZcfXYfi b[Yb`XYg'DfcZ]gdcfhg`'gY]Yg`Xi fW
NU\`i b[gUbFY]nY`Z0f'5i hc[fUa a gWfY]VYb`cXYf']bhYbg]j Y
⇒ hYfU_h]cbYb`a]h': Ubg`'nY][hž'XUgg`\]bhYf`XYb`[fc»Yb`BUa Yb
cZh'[Ubn`a YbgW`]W Y'; YgW]W hYb`ghYW_Yb"

9]bV`]W_`]b`X]Y`5i hc[fUa a !? i `hi f`]a
: i » VU``

8]Y`5i hc[fUa a !?i `hi f`gd]Y`h'Y]bY`k]W h][Y`F c``Y`]a : i » VU``ž
gck c`\`Z0f`X]Y': Ubg`U`g`Ui W`Z0f`X]Y`Gd]Y`Yf"8]YgY`_Y]bYbž'cZh
dYfg0b`]W` [YghU`hYhYb`GWf]ZhYb`ghY\Yb`gma Vc`]gW`Z0f`X]Y
JYfV]bXi b[`nk]gWYb`5h\`YhYb`i bX`]fYb`5b\`Ab[Yfb"
5i hc[fUa a Y`g]bX`a Y`f`U`g`bi f`i bhYfgWf]ZhYb`/g]Y`g]bX
9f]bbYfi b[ggh0W_Yž'X]Y`cZh'a]h'VYgcbXYfYb`A ca YbhYb`]a `@YVYb
XYf`i bhYfgh0hYf`j Yf_b0dZh]g]bX"

: 0f`Gd]Y`Yf`]gh`XUg`i bhYfgWfY]VYb`j cb`5i hc[fUa a Yb`cZh`Y]b`HY`
]\fYg`0ZZYbh]W Yb`5i Zhf]hgi bX`]\fYf`⇒Ybh]h`h"J]Y`Y`DfcZ]g
bY\`a Yb`g]W` [YfbY`NY]h`XUZ0fž`XU`g]Y`k]ggYbž'k]Y`VYXYi hYbX
X]YgY'; YghYb`Z0f`]fY': Ubg`g]bX"; `Y]W`nY]h][`nY][h`X]Y`6]hY`j cb
8Uj]Y`GY`_Y`Ub`G]XbYm: f]YXYž'gY]bY`5i hc[fUa a Y`Z0f`]b`ni
i bhYfgWfY]VYbž'XUgg`XYf`8fi W`_i bX`X]Y`F ci h]bY`XYg`DfcZ]XUgY]bg
a UbW`a U`Y]bY`[fc»Y`6Y`Ughi b[`XUfghY`Yb`_0bbYb"⇒`X]YgYf
<]bg]W h'gd]Y[Y`h'g]W`Y]b`cZh'i bVYgi b[YbYf`5gdY`h`XYg
DfcZ]gdcfhg`k]XYf.`X]Y`6U`UbW`nk]gWYb`di V`]WdYfgcbU`i bX

df]j UhYa '@YVYb"

6Yfi Z]W\Yf`K YfXY[Ub[`XYf`VYhY`][hYb
Gd]Y`Yf

8Uj]Y`GY`_Y`i bX`G]XbYm: f]YXY` \ UVYb`VY]XY`]bhYfYggUbhYž`k Ybb
Ui W`i bhYfgW\]YX`]W\Y`?Uff]YfYk Y[Y`]a`XYi hgW\Yb` : i » VU`
Y]b[YgW\`U[Yb`"GY`_Yž`XYf`U`g`hU`Ybh]YfhYf`GhØfa Yf`[]hž`VY[Ubb
gY]bY`dfcZ]a`À»][Y`?Uff]YfY`]b`XYf`š [YbX`j cb`F 6`@]dn][ž`VY] cf
Yf`&\$%+`ni`<Yfh\U`6G7`k YW\gY`hY`"8cfh`_cbbhY`Yf
VYY]bXfi W_YbXY`GhUh]gh]_Yb`a`]h`%&`*`9]bgÀhnYb`i bX`&(`HcfYb
j cfk Y]gYbž`k Ug`]\a`Ui W`9]bgÀhnY`ZØf`X]Y`B Uh]cbU`a`UbbgW\UZh
XYf`i`&%`Y]bVfUW\hY`"BUW\`Y]bYf`NY]h`VY]a`%`: 7`?`Ò`bž`]b`XYf`Yf
[Y[Ybk`Àfh][`Ui ZgY]bY` : cfa` \cZž`k YW\gY`hY`GY`_Y`]a`Gca`a`Yf
&\$&`ni`a`<Ua`Vi`f[Yf`GJ`"

G]XbYm: f]YXY` \]b[Y[Yb` \Uh`Y]bY`k`Yb][Yf` \Ai` Z][Yž`UVYf`YVYbZU`g
VYa`Yf`_Ybgk`YfhY`?Uff]YfY` \]bhYf`g]W\`"CVk`c\`Yf`&\$%,`XYb
Gdfi`b[`ni`XYb`DfcZ]g]j`cb`<Yfh\U`6G7`gW\UZhYž`V`]YV`Yf`c` \bY
9]bgÀhnY`]b`XYf`YfghYb`A`UbbgW\UZh`i`bX`j`YfVfUW\hY`gY]bY`NY]h
j`cfk`]Y[YbX`]b`XYf`nk`Y]hYb`A`UbbgW\UZh`XYg`J`YfY]bg`"BUW\
j`YfgW\]YXYbYb`HfUbgZYfg`i`bX`Y]bYf`DUi`gY`j`cb`Y]bYa``š\`fž`\`À`h`Yf
a`]h`Yfk`Y]Y`Y]b`9b[U[Ya`Ybh`VY]a``ž`Zi`YbWf!7`i`V`8Y`Um`Gdcfhg
6Yf`]b`"8]YgYf`K`YW\gY`nY][h`b]W\h`bi`f`X]Y`J`]Y`ZU`h`XYf
?Uff]YfYk`Y[Y`]a` : i » VU`ž`gcbXYfb`Ui`W\ž`k`]Y`g]W\`XUg
Gd]Y`Yf`YVb]g]a` \Yi`h][Yb` : i » VU`Xi`fW\`X]Y`9]bV]bXi`b[`j`cb
GcW]U`!A`YX]U!D`UhZcfa`Yb`j`Yf`ÀbXYfh`\Uh`"

: Ub!J Yf\ U`hYb`i`bX`X]Y`J`YfV]bXi`b[`ni
Gd]Y`Yfb

8]Y`ž`hYfU`_h]cbYb`nk`]gW\Yb`Gd]Y`Yfb`i`bX` : Ubg`g]bX`Y]b
YbhgW\Y]XYbXYg`9`Ya`Ybh`]a`Gdcfh`"8Ug`J`Yf\U`hYb`j`cb` : Ubgž`k`]Y
]a` : U`XYg`FØW`k`i`fZY`g]j`cb`GY`_Yg`Hf]_chž`_Ubb`i`bhYfgW\]YX`]W\Y
9a`ch]cbYb`i`bX`FYU`_h]cbYb`\Yf]cffi`ZYb`" : Ubg`gY\Yb`c`Zi`X]Y
Gd]Y`Yf`U`g`J`cfV]`XYfž`i`bX`\fY`9fk`Ufhi`b[Yb`_`ÒbbYb`gY`f`\`cW\
gY]b`"ž`NY]hYbž`]b`XYbYb`gcn]U`Y`A`YX]Yb`X]Y`K`U\fbY`a`i`b[`j`cb

Gd]Y`Yfb`VYY]bZi ggYbž]gh`X]YgY`8 mbUa]_`bcW`]bhYbg]j Yf
[Yk cfXYb"

D`UmYfg`k]Y`GY`_Yž`X]Y`U_h]j `a]h`]\fYb` : Ubg`]bhYfU[]YfYb`i bX
5i hc[fUa a Y`[YVYbž`gW`UZZYb`Y]bY`dcg]h]j Y`5ha cgd`ĀfY`i bX
j YfghĀf`Yb`X]Y`6]bXi b[`ni`XYb`5b`Āb[Yfb`"5bXYfgYfgY]hg`_ÖbbYb
bY[Uh]j Y`9fZU`fi b[Ybž`k]Y`XUg`Ni fØW`k YfZYb`gY]bYg`Hf]_chgž`XUg
; YZØ`XYf`9bhhĀi gW`i b[`VY]`Y]bYa`Gd]Y`Yf`Yfj cffi ZYb`i bX
nY][Ybž`XUgg`b]W`h`U`Y`6Y[Y[bi b[Yb`fY]Vi b[g`cg`j Yf`Ui ZYb`
Gc`W`Y`9f`YVb]ggY`g]bX`YXcW`HY]`XYg`dfcZYgg]cbY`Yb`Gdcfhgž
XYf`gck c`\<`<Ö`Yb`U`g`Ui W`H]YZYb`a]h`g]W`Vf]b[h`

≠g[YgUa hj YfXYi h]W`h`XUg`J Yf`U`hYb`gck c`\<`XYf`Gd]Y`Yf`U`g
Ui W`XYf` : Ubg`Y]b`_ca d`YI Yg`K YW`gY`gd]Y`ž`XUg`ghUf`_j cb`XYb
]bX]j]Xi Y`Yb`9fZU`fi b[Yb`i bX`9fk Ufhi b[Yb`VYY]bZi ggh`k]fX"

8YhU]`g

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