

? cghYb`cgY`9!F YW\ bi b[. 'l bhYfghØhni b[
ZØf`GY`VghghÀbX][Y`UV`&\$&(

A YhU!6YgW\ fY]Vi b[. '5V`>Jbi Uf`&\$&) `hf]hh`b`8Yi hgW\`UbX
XUg`bYi Y`9!F YW\ bi b[ggmghYa` `]b`?fUZh`8Yf`5fh]_Y`Yf`Ài hYfh
X]Y`<YfUi gZcfXYfi b[Yb`ZØf`GY`VghghÀbX][Yž`]bgVYgcbXYfY
ZØf`Gc`c!GY`VghghÀbX][Yž`i bX`ghY`h`X]Y`_cghYb`cgY`@Øgi b[
j cb`5W\ci bhUV`Y`j cfž`X]Y`Y]bY`Y]bZUW\Y`9fghY`i b[ž`XYb
JYfgUbX`i bX`9a dZUb[`j cb`9!F YW\ bi b[Yb`Yfa Ø[`]W\h`
9fZU`fYb`G]Yž`k]Y`ØVYf`%\$`\$\$`GY`VghghÀbX][Y`j cb`X]YgYf
]bbcj Uh]j Yb`GhYi Yf!5dd`dfcZ]h]YfYb`i bX`k Ufi a`X]Y
8][]hU`]g]Yfi b[`ZØf` : fY]VYfi ZYf`k]W\h][`]gh`



8][]hU`Y`F YW\ bi b[gYfghY`i b[`ZØf`
GY`VghghÀbX][Y`UV`&\$&) . '7\ UbW\ b`i bX
<YfUi gZcfXYfi b[Yb`ZØf`X]Y` ; Ya Y]bgW\ UZh

8]Y`9]bZØ\fi b[`XYg`9!F YW\ bi b[g!GmghYa g`]b`8Yi hgW\`UbXž`X]Y

ni a '%>Ubi Uf'&\$&) 'jb'j c`Ya 'l a ZUb['jb'?fUZh'hf]hhž'ghY`h'Y)bY
VYXYi hYbXY`BYi Yfi b['ja '6YfY]W\XYf'FYW\bi b[gghY`i b['XUfž
]bgVYgcbXYfY`ZØf'Gc`c!GY`VghghÅbX][Y''9)bY`U_hi Y`Y`l a ZfU[Y
nY][hž'XUgg`ZUgh`X]Y`<À`ZhY`XYf`GY`VghghÅbX][Yb`GW\k]Yf][_Y]hYb
\Uhž`X]Y`VYghY\YbXYb`VØfc_fUh]gW\Yb`5bZcfXYfi b[Yb`ni
j YfghY\Yb"8]Y`bYi Y`FY[Y`i b['_ØbbhY`XU\Yf`ZØf`j]Y`Y`Y)bY
ni gÅh`]W\Y`<ØfXY`XUfghY`Yb"

8]YgY`bYi Y`Y`fU`XYf`9!FYW\bi b['VYhf]Zh`b]W\h`bi f`X]Y`5fhi bX
K Y]gYžk]Y`FYW\bi b[Yb`YfghY`hi bX`j YfgW\]W_h`k YfXYbž`gcbXYfb
\Uh`Ui W`h]YZ[fY]ZYbXY`5i gk]f_ b[Yb`Ui ZX]Y`5fVY]hgk Y]gY`XYf
GY`VghghÅbX][Yb`ja ' [Ubnyb`@UbX"8Yf`K UbXY`ni `X][]hU`Yb
FYW\bi b[Yb`]gh`Y)bY`FYU_h]cb`Ui ZX]Y`ni bY`a YbXYb
5bZcfXYfi b[Yb`Ub`HfUbgdUfYbn`i bX`9ZZ]n]Ybn`ja
; YgW\ÅZhj Yf_Y`f"

l a `XYb`GY`VghghÅbX][Yb`X]Y`l a ghY`i b[`ni `Yf`Y]W\hYfbž`V]YhYh
X]Y`GhYi Yf!5dd`5W\ci b hUV`Y`UV`XYa`%'C`_hcVYf`&\$&(`Y)bY
_cghYb`cgY`J Yfg]cb`j\`fYf`GcZhk UfY`Ub"8]YgY`Yfa`Ò[`]W\h`Y)bY
fYW\hg]W\YfY`9fghY`i b[ž`XYb`J YfgUbX`i bX`9a`dZUb[`j`cb`9!
FYW\bi b[Yb`"H]bc`?Y`Yfž`A]h[fØbXYf`j`cb`5W\ci b hUV`Y`ž`VYhcbh
X]Y`K]W\h][_Y]h`X]YgYf`b]h]Uh]j Y.`K]f`k`c`Yb`XYb`Gc`c!
GY`VghghÅbX][Yb`i bX`i: fYY`UbW\fbž`X]Y`cZh`gW\cb`a`]h`6Øfc_fUh]Y
ØVYfZcfXYfh`g]bXž`Y`ZYbž`X]YgY`bYi Y`HYW\bc`c[]Y`Y)bZUW`i bX
bi hYfZfYi bX`]W\`ni `]bhY[f]YfYb"

8]Y`bYi Yb`FY[Y`i b[Yb`j Yf`Ub[Yb`j`cb`GY`VghghÅbX][Ybž`XUgg`g]Y
g]W\`a`]h`hYW\b]gW\Yb`i: cfa`UhYb`k]Y`L!FYW\bi b[ž`NI` ;` : Yf`8`i`bX
XYf`D9DDC`@`bZfUghfi`_hi`f`Ui`gY]bUbXYfgYhYb"J]Y`Y`X]YgYf
6Y[f]ZY`g]bX`a`Ò[`]W\Yfk`Y]gY`b]W\h`U`Yb`GY`VghghÅbX][Yb
[Y`Ài`Z][ž`k`Ug`X]Y`G]hi`Uh]cb`bcW\`_ca`d`n]YfhYf`a`UW\h`l`a`XYa
Ybh[Y[Ybni`k]f_Ybž`Yfa`Ò[`]W\h`Yg`5W\ci b hUV`Y`XYb`Bi`hYfbž`]\fY
VYghY\YbXYb`D8: !8c`_i`a`YbhY`i`b`_ca`d`n]Yfh`]b`X]Y`VYb`Òh][hYb`9!
FYW\bi b[gZcfa`UhY`i`a`ni`k`UbXY`b"

A]h`ØVYf`%\$`\$\$`VYfY]hg`U_h]j`Yb`Bi`hYfb`]b`8Yi`hgW\`UbX`\Uh`
5W\ci b hUV`Y`g]W\`U`g`Y]bY`ZØ\`fYbXY`@Øgi`b[`ja`6YfY]W\`XYf
GhYi`YfVYfUhi`b[`YhUV`]Yfh"8]Y`gY]h`&\$%,`Ybhk`]W_Y`hY`5dd`\Uh`

gWcb'ØVYf'*) "\$\$\$'GhYi YfYf_`Àfi b[Yb'VYUfVY]hYhi bX'n]Y'h
XUfUi Z'UVž'GY`VghghÀbX][Yb'XUg'A UbU[Ya Ybh'\fYf
GhYi YfUb[Y`Y[Yb\Y]hYb'ni `Yf`Y]Wk.hYfb"

8]Y'8][]hU`]g]Yfi b[`XYf`F YWk bi b[gghY``i b[`]gh`b]Wk h`bi f`Y]b
hYWk b]gW Yf': cfhgWk f]hž'gcbXYfb`Ui Wk`Y]b`GWk f]h]b`Y]bY`Ni _i bZhž
]b`XYf`GY`VghghÀbX][Y`]\fY':]bUbnyb`YZZ]n]YbhYf`j Yfk U`hYb`_ÒbbYb"
8]YgY`9bhk]W`i b[`_Ubb`]bg[YgUa h`ni `Y]bYf`GhÀf`_i b[`XYf
; Ya Y]bgWk UZh] cb': fY]VYfi ZYfb`i bX`?`Y]bi bhYfbY\ a Yfb`ZØ\ fYbž
]bXYa`g]Y`XYb`Ni [Ub[`ni `bchk YbX][Yb`F Yggci fWk b`j YfVYggYfh
i bX`6Øfc`_fUh]Y`UVVUi h"

⇒ XYb`_ca a YbXYb`A cbUHYb`k]fX`g]Wk`nY][Ybž`k]Y`[i h`X]Y
GY`VghghÀbX][Yb`X]YgY`J YfÀbXYfi b[Yb`UbbY\ a Yb`i bX`k]Y`g]Y`X]Y
Ub[YVchYbYb`K Yf_nYi [Y`bi hnYbž`i a`] \fY`hÀ[`]Wk Yb
< YfUi gZcfXYfi b[Yb`ni `a Y]ghYfb" B UWk`XYf`YfZc`[fY]Wk Yb
⇒ d`Ya Ybh]Yfi b[`XYf`9!F YWk bi b[`_ÒbbhYb`k Y]hYfY`⇒bcj Uh]cbYb
Zc`[Ybž`X]Y`XUg`5fVY]hYb`]b`XYf`GY`VghghÀbX][_Y]h`bcWk`Y]bZUWk Yf
i bX`ni [Àb[`]Wk Yf`a UWk Yb"

8YhU]`g

6Ygi Wk Yb`G]Y`i bg`Ui Z.`a Y]b!VYf`]b"bYh