

C dh]a]YfhY`A cV]`Zi b_j Yfgcf[i b[.
HY`Y_ca `Yfk Y]hYfh`); !BYhn`]a `K Y]a UfYf
@UbX

J YfVYggYfb`G]Y`≠fY`A cV]`Zi b_YfZU\fi b[`]a `@UbX_fY]g
K Y]a UfYf`@UbX`8]Y`HY`Y_ca `Uh`X]Y`); !J Yfgcf[i b[`]b
; fc»cVf]b[Yb`Ui g[YVUi hžk Ug`X]Y`A cV]`Zi b_UVXYW_i b[`i bX
6UbXVfY]hY`Yf\Ø\h`9fZU\fyb`G]Y`a Y\f`ØVYf`k Y]hYfY
[Yd`UbhY`GhUbXcfhY`i bX`X]Y`Ni gUa a YbUfVY]h`a]h
?ca a i bYb`ZØf`Y]bY`ni _i bZhgg]WYfY`A cV]`Zi b_]bZfUghfi _hi f
V]g`&\$&*"



A cV]`Zi b_j Yfgcf[i b[`]a `@UbX_fY]g`K Y]a UfYf`@UbX`Ui Z
XYa `Jcfa UfgW`

8]Y`HY`Y_ca ` \Uh'k]YXYf'ni [YgW`U[Yb`'`b`XYb`YhnhYb`nk Y]
A cbUHYb`k i fXY`X]Y`A cV]Zi b_j Yfgcf[i b[`]a `@UbX_fY]g`K Y]a UfYf
@UbX`Ui ZY]b`bYi Yg`@Yj Y`[Y\cVYb`"8 Ub`_XYf`9fk Y]hYfi b[`Y]bYg
) ; !GhUbXcfhg]b` ; fc»cVf]b[Yb`_ObbYb`bi b`bcW`a Y\ f
Bi hnYf]bbYb`i bX`Bi hnYf`j cb`Y]bYa `V`]hngW`bY`Yb`A cV]Zi b_bYhn
dfcZ]h]YfYb`"8]Y`bYi YghY`HYW`b]_`gcf[h`XUZØfž`XUgg`X]Y`A cV]Zi b_!
5VXYW_i b[`b]W`h`bi f`]b`XYf: `ÀW`Y`k ÀW`ghž`gcbXYfb`Ui W`X]Y
6UbXVfY]hY`a Ugg]j `UbghY][h`i bX`XUg`b]W`h`bi f`XfUi »Ybž
gcbXYfb`Ui W`]b`XYb`Y][YbYb`j]Yf`K `ÀbXYb`°

`b`XYf`?ca a i bY` ; fc»cVf]b[Ybž`X]Y`ghfUhY []gW`i [Øbgh][`Ub`XYf
5i hcVU`b`i bX`6U`bghfYW`Y [Y`Y[Yb`]ghž`k i fXY`X]Y`a cXYfbY
`bž`Ughfi _hi f`]bghU`]Yfž`X]Y`XYb`< UbXmbi hnYfb`Y]bYb`VYggYfYb
9a dZUb[`VYgW`Yfh`"8 Yf`6YXUfZUb`6UbXVfY]hY`ghY][h`À`f`]W`i a
fi bX`" \$`DfcnYbh`"8 U`a ØggYb`k]f`a]hi bgYfYa `A cV]Zi b_Ui gVUi
cfXYbh]W`HYa dc`a UW`Yb`° žYf_`Àfh; Ycf[`j cb`K U[bYfž`XYf
l bhYfbY`a YbggdFYW`Yf`XYf`HY`Y_ca "`<]Yf`k]fX`_Uf.`8]Y`HY`Y_ca
V`Y]Vh`Ua `Di `g`XYf`NY]hi bX`ghY`h`g]W`XYb`<YfUi gZcfXYfi b[Yb
XYf`X][]hU`Yb`Ni _i bž`°

6YY]bXfi W_YbXY`NU\`Yb`i bX`ni _ØbZh][Y D`ÀbY

5_hi Y`VYhfY]Vh`X]Y`HY`Y_ca `]a `@UbX_fY]g`K Y]a UfYf`@UbX`VYfY]hg
ghc`nY`) ` `GhUbXcfhY`"8]Y`<Ui g`U`hgUVXYW_i b[`_fUhh`XUfUbž`VY]
VY]bU`Y`%\$\$`DfcnYbh`ni `UbXYb`"l bX`XUg`6YghY3`6]g`&\$`&`*`gc`Yb
k Y]hYfY`%) `GhUbXcfhY` \]bni _ca a Ybž`d`i g`9fk Y]hYfi b[Yb`Ub
nk `Z`VYghY`YbXYb`i b_a UghYb`a]h`@H9`cXYf`); `°<]Yf`k]fX`b]W`h
bi f`X]Y`HYW`b]_`Ui Z[YfØghYhž`gcbXYfb`Ui W`XUg`Bi hnYfYf`YVb]g
Yf`YV`]W`j YfVYggYfh`

8cW`XUZØf`VfUi W`h`X]Y`HY`Y_ca `X]Y`l bhYfghØhni b[`j cf`C`fh`l a
bYi Y`GhUbXcfhY`ni `Yff]W`hYbž`g]bX`?ccdYfUh]cbYb`a]h`?ca a i bYb
i bX` ; fi bXghØW_gY][YbhØa Yfb`i bYf`Àgg`]W`"8 Ug`]gh`Yi fY`7`UbW`ž
k Ybb`]f`ØVYf`Y[hž`D`Uhn`ZØf`Y]bYb`A cV]Zi b_ghUbXcfh`ni f
JYfZØ[i b[`ni `ghY`Yb`"8]Y`8Yi hgW`Y`i b_hi fa`]gh`XYf`DUfhbYf`ZØf
XYb`5i ZVUi `i bX`X]Y`JYfk U`hi b[`X]YgYf`5b`U[YghUbXcfhY`

⇒ a a Yf`]bZcfa]Yfh'ØVYf`X]Y

B Yhnj YfZØ[VUf_Y]h°

: Øf`U`Yž`X]Y`k]ggYb`k c`Ybž`k]Y`Yg`i a `X]Y`A cV]`Zi b_j Yfgcf[i b[
Ub`] \fYa `K c\bcfh`ghY\hž`[]Vh`Yg`X]Y`@Øgi b[.`A]h`bi f`Y]bYa `?`]W_
Ui ZX]Y`K YVgY]hY`XYf`HY`Y_ca ` _Øbbh] \f`U`Y`bZcfa Uh]cbYb`ni a
BYhnUi gVUi `UVfi ZYb`"9[U`ž`cV`] \f`Ga Ufhd\cbY!Bi hnYfž; Ua Yf
cXYf`Y]bZUW`bi f`K \UhgUdd!J]Y`gW`fY]VYf`gY]X` `X]Y`HY`Y_ca `]gh
VYfY]hž`XYf`X][]hU`Yb` , VYf`Ughi b[`Ybh[Y[Ybni k]f_Yb`i bX`Yi W`
X]Y`VYghY`A cV]`Zi b_j Yfgcf[i b[`ni `[UfUbh]YfYb°

8]Y`Ni _i bZh`XYf`?ca a i b[_Uh]cb`]a `@UbX_fY]g`K Y]a UfYf`@UbX
g]Y`h`U`gc`j]Y`j YfgdfYW`YbX`Ui g`"8]Y`HY`Y_ca `]gh`Ui ZX]Ya `VYghYb
K Y[ž`XUg`BYhn`k Y]hYf`ni `cdh]a]YfYb`i bX`j Yf`Àgg`]W`ni `a UW`Yb"

8YhU]`g

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