

A Ufh]bgi a nØ[Y`]b`6Yf`]b.`K c`XYf` J Yf_Y`f`Ua`"%%"Bcj Ya VYf`ghcW`h°

5a`%%"Bcj Ya VYf`n]Y`Yb`6Yf`]bYf`Ua`]Yb`a`]h`@UhYfbYb`
Xi fW`X]Y`GhUXh"J Yf_Y`fgY]bgW`f`b_i`b[Yb`]b`a`Y`fYfYb`
6Yn]f_Yb`Yfk UfhYh"

: f]YXf]W`g`U]b`!`?`fYi`nVYf[`ž`8Yi`hgW`UbX`!`B5;`#B5;
F YXU_h]cb`"

⇒`6Yf`]b`k`]fX`Yg`k`]YXYf`Vi`bhi`bX`"YVYbX][`ž`XYbb`X]Y`HfUX]h]cb`
XYf`A`Ufh]bgi`a`nØ[`Y`ghY`h`j`c`f`XYf`HØf`"X`XYg`X`U`f`Ua`"%%"
Bcj`Ya`VYf`n]Y`Yb`?`]bXYf`a`]h`]\`fYb`"Yi`W`hYbXYb`@UhYfbYb`Xi`fW`
X]Y`GhfU»`Yb`XYf`<`Ui`dhghUXh"8`]YgY`Z`gh`]W`Yb`i`a`nØ[`Y`g]bX`b]W`h`
bi`f`Y]bY`:`fYi`XY`ZØf`X]Y`?`Y]bYbž`gcbXYfb`Ui`W`Y]bY`
<`YfUi`gZc`fXYfi`b[`ZØf`XYb`J`Yf_Y`f"K`]Y`6Yf`]b`@j`Y`VYf]W`hYhY`ž`
k`]fX`Yg`]b`j`YfgW`]YXYbYb`GhUXhhY`]Yb`ni`Yf`YV`]W`Yb`
J`Yf_Y`fgY]bgW`f`b_i`b[`Yb`_ca`a`Yb"

8]Y`6Yf`]bYf`J`Yf_Y`fg]bZc`fa`Uh]cbgnYbhfU`Y`fU`NŁ`"Uh`VYfY]hg`j`c`f`
XYb`VYj`c`fghY`YbXYb`GhØfi`b[`Yb`[`Yk`Ufbh"5i`hc`ZU`fYf`gc`"hYb`g]W`
Ui`Zj`c`"Y`GhfU»`Yb`i`bX`i`a`Y]hi`b[`Yb`Y]bghY`"Ybž`XU`X]Y`i`a`nØ[`Y`]b`
a`Y`fYfYb`6Yn]f_Yb`ghUhhZ]bXYb"6YgcbXYfg`VYhfc`ZYb`g]bX`
:`f]YXf]W`g`U]b`ž`?`fYi`nVYf[`ž`A`]hYž`A`c`UV]hž`DUb`_ck`"i`bX`GhY[`]m!
NY`"YbXcfZ" <`]Yf`k`]fX`XYf`J`Yf_Y`f`Ub`j`YfgW`]YXYbYb`GhY`"Yb`ni`a`
Gh`"ghUbX`_ca`a`Ybž`k`Å`fYbX`X]Y`?`]bXYf`a`]h`]\`fYb`
gY`Vgh[`YVUghY`hYb`@UhYfbYb`X]Y`GhfU»`Yb`Yf`Y`"Yb"

J`Yf_Y`fgW`Uc`g`]b`XYb`GhUXhhY`]Yb`

⇒`:`f]YXf]W`g`U]b`k`]fX`Yg`nk`]gW`Yb`%+.`\$`i`bX`%,`.)`i`]\`f`Yb[`ž`
]bgVYgcbXYfY`]b`XYf`A`c`XYfgc`b`ghfU»`Y`i`bX`XYf`F`Yj`U`Yf`GhfU»`Y`"

5i W\`j b`? fYi nVYf[`]gh`nk]gW\Yb`%*`i bX`%+`l \f`a]h`Gh`Øfi b[Yb`ni
fYW\ bYb`ž`k Ybb`X]Y` : Ua `]`Yb`j`cb`XYf`Mc`fW`ghfU» Y`ØVYf`XYb
A Y\`f]b[XUa`a`n]Y\`Yb`" `ϕ`A]hY`k]fX`XYf`J Yf`_Y\`f`nk]gW\Yb`%` .` \$
i bX`%-` .` \$`l \f`fi bX`i`a`XYb`@`gh[UfhYb`i`bX`X]Y`GW\`c» Vf`ØW`_Y
VYY]b`hf`ÅW`h][`h`

A`cUV]h`d`Ub`h[`Y]W\`nk`Y]`@UhYfbYbi`a`nØ[Y`ž`X]Y`nk]gW\Yb`%+`i`bX
&\$`l \f`ZØf`ni`g`Åh`n`]W\`Y`J`Yf`_Y\`fgVY\`]bXYfi`b[Yb`gcf[Yb`k`YfXYb`"
5i`hcZU\`fYf`gc`h`Yb`g]W\`Ui`Z;`YXi`X`Y]b`ghY`Yb`ž`k`Ybb`g]Y`ja
6YfY]W\`XYf`Ghfca`ghfU» Y`i`bX`XYf`K`]WY`ZghfU» Y`i`bhYfk`Y[`g`g]bX`"
5i`W\`ja`DfYbn`Ui`Yf`6Yf[`k`]fX`Yg`nk]gW\Yb`%*` .` \$`i`bX`%-`l \f`ni
_i`fnnY]h][`Yb`Gh]`gh`ÅbXYb`_ca`a`Yb`ž`k`Ybb`X]Y`?`]bXYf`XYb`ϕ\`b!
GdcfhdUf`_Xi`fW\`ei`YfYb`"

9]b` : Y`gh`ZØf`X]Y`[`Ub`nY` : Ua `]`Y

ϕ`GhY[`]h`!NY\`YbXcfZn]Y\`Yb`X]Y`_`Y]bYb`@UhYfbYb!Hf`Å[`Yf
nk]gW\Yb`%*` .` \$`i`bX`%` .` \$`l \f`j`cb`XYf`F`ch\`YbVi`f[`ghfU» Y`ØVYf
X]Y` ;`fi`bYk`U`XghfU» Y`ni`fØW`" `5i`hcZU\`fYf`a`ØggYb`\`]Yf`a`]h
Yf\`YV`]W\`Yb`J`YfnØ[`Yfi`b[`Yb`fYW\`bYb`" `8]Y`A`Ufh]bgi`a`nØ[`Y`g]bX
b]W\`h`bi`f`Y]b`gW\`ØbYf`6fUi`W\`ž`gcbXYfb`Ui`W\`Y]bY` ;`Y`Y[`Yb\`Y]h`ZØf
: Ua `]`Yb`ž`[`Ya`Y]bgUa`NY]h`ni`j`YfVf]b[`Yb`i`bX`X]Y`J`cfZfYi`XY`Ui`Z
XYb`K`]bhYf`ni`[`Yb]Y» Yb`" `8]Y`ZYgh]W\`Yb`@]YXYf`ž`X]Y`k`Å\`fYbX`XYf
l`a`nØ[`Y`[`Ygi`b[`Yb`k`YfXYb`ž`hfU[`Yb`ni`f`VYgcbXYfYb`5ha`cgd\`ÅfY
VY]i`bX`a`UW\`Yb`X]YgY`HfUX]h]cb`ni`Y]bYa`i`bj`Yf[`Ygg`]W\`Yb
9f`YVb]g"

8]Y`J`cfVYfY]h`i`b[`Yb`g]bX`j]b`j`c`Ya` ;`Ub[`Y`ž`i`bX`X]Y`6Yf`]bYf
ZfYi`Yb`g]W\`Ui`Z]Y]b`k`Y]hYfYg`ϕ\`f`j`c`Yf`Yi`W\`hYbXYf`@UhYfbYb`i`bX
Zf`Ø\`]W\`Yf` ;`Yg]W\`hYf`" `9g`V`Y]Vh`UVni`k`UfhYb`ž`k`]Y`X]Y
J`Yf`_Y\`fgg]h`i`Uh]cb`Ua``%"`B`cj`Ya`VYf`hUhg`ÅW\`]W\`Ui`ggY\`Yb`k`]fX`ž
UVYf`Y]bYg`]gh`g]W\`Yf`" `8]Y`A`Ufh]bgi`a`nØ[`Y`g]bX`Y]b`ZYghYf
6YghUbXhY]`XYf`6Yf`]bYf`?`i`hi`fi`bX`n]Y\`Yb`YXYg`ϕ\`f`nU\`fY]W\`Y
: Ua `]`Yb`Ub`" `K`]Y`6Yf`]b`@]Y`VYf]W\`hYhY`ž`gc`h`Yb`g]W\`5i`hcZU\`fYf
[`i`h`Ui`ZX]Y`VY]`cfghY\`YbXYb`9]bgW\`f`Åb`_i`b[`Yb`j`cfVYfY]hYb`"

8YhU]`g

Cfh

: f]YXf]W\g\U]b! ? fYi nVYf[ž`8Yi hgW\`UbX

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