

?]a a]Wł g`Ni _i bZh`VY]a : 7`6UmYfb.
6`Y]Vh`Yf`cXYf`k]fX`Yf`j Yf_Ui Zh3

œg\i U'?]a a]Wł`ghY`h`j`c`f`X`fY]`Ni _i bZhggNybUf]Yb`VY]
6UmYfb`A ØbWłYb`"K Ug`Yfk UfhYh`XYb`B Uh]cbU`gd]Y`Yf3`5`Y
8YhU]`g`\\Yf"

⇒ a`<YfnYb`j`cb`A ØbWłYb`ghY`\\Yb`X]Y`J YfUbhk`cfh]WłYb`XYg: 7
6UmYfb`j`c`f`Y`b`hgWłY]X`Y`b`XYb`K Y]WłYb`ghY`i`b[Yb`ž`X]Y`b]Wł`h`bi`f`X]Y
Ni _i bZh`XYg`J`Y`fY]bg`ž`g`cb`XYfb`Ui Wł`X]Y`j`cb`œg\i U'?]a a]Wł
VYhfYZZYb`"8Yf`&- !`À`\\f][Y`B Uh]cbU`gd]Y`Yfž`XYf`k`À`\\fYb`X`XYf
9i`fcdUa`Y]ghYfgWłUZh[`À`bnhY`ž`k]fX`]b`XYb`_ca`a`Yb`XYb`K`c`WłYb
i`b`X`A`cb`UhYb`]b`XYb`:`c`_i`g`f`ØW`_Yb`ž`XYb`b`gY]b`U`_hi`Y`Y`f`J`Y`fhfU[
`À`i`Zh`&\$&) `Ui`g`"8]Yg`\\Uh`VY]:`Ubg`i`b`X`9i`dYfhYb`VYfY]hg`X]j`YfgY
GdY`_i`Uh]cbYb`Ub[Yghc»Yb"

8]Y`6YXYi hi b[`j`cb`?]a a]Wł g
9bhgWł Y]Xi b[Yb`ZØf`XYb`: 7`6UmYfb

?]a a]Wł`]gh`b]Wł`h`bi`f`Y]b`GWł`ØggY`gd]Y`Yf`ZØf`X]Y`A`UbbgWłUZhž
gcbXYfb`Ui Wł`Y]b`: Yg]Wł`h`XYg`J`Y`fY]bg`"GY]bY`_ca`a`Yb`XYb
9bhgWł Y]Xi b[Yb`\\UVYb`a`Ò[`]Wł`Yfk`Y]gY`k`Y]hfY]WłYb`XY
5i`gk]f`_i`b[Yb`Ui`ZX]Y`HYUa`XmbUa`_]`_i`b`X`ni`_ØbZh][Y`HfUbgZYfg"
9]b`J`Yf`_Ui`ZX]YgYg`HU`Yb`hg`_ØbbhY`Y]bY`[`f`Ò»`YfY
I`a`ghfi`_hi`f]Yfi`b[`]bbYf`\\U`V`XYg`?`UXYfg`b`UWł`g]Wł`n]Y`\\Yb`ž`X]Y
Ui`Wł`X]Y`Mci`b[ghYf`k]Y`5`Y`_gUbXYf`DUj``cj`]WVYhfYZZYb`k`ØfXY"

8fY]`a`Ò[`]Wł`Y`GnYbUf]Yb`ZØf`?]a a]Wł

5_hi`Y`X`XYi`hYb`g]Wł`XfY]`a`Ò[`]Wł`Y`GnYbUf]Yb`ZØf`œg\i U'?]a a]Wł
Ubž`X]Y`gY]bY`F`c`Y`]a`HYUa`i`b`X`X]Y`GhfUhY[]Yb`XYg`J`Y`fY]bg
VYhfYZZYb`_ØbbhYb`"Ni`b`À`Wł`gh`_ØbbhY`Yf`U`g`F`Y`Wł`hgj`Y`fhY]X][`Yf`

k Y]hYf\]b`]b`A ØbWYb`V`Y]VYb"8]Yg`k ØfXY`VYXYi hYbž`XUgg`X]Y
J YfY]bgZØ\fi b[`a`h`?]a`a`]W`Y]bY`J YfhfU[gj Yf`Àb[Yfi b[
UbghfYVhž`i`a`XUg`F]g]_c`ni`a`]b]a`]YfYbž`]b`]a`b`ÀW`ghYb`đ\`f
UV`ÒgYZfY]`ni`j`Yf`]YfYb"

5`hYfbUh]j`_`ÒbbhY`?]a`a`]W`U`i`W`]bg`A`]hhY`ZY`X`ni`fØW`_`Y`fYbž`k`Ug
j`cb`HfU]bYf`J`]bW`bh`?`ca`d`Ub`m`U`g`A`Ò[`]W`_`Y]h`VYhfUW`hYh`k`]fX"
<]Yf`\`ÀhhY`?]a`a`]W`X]Y`7`\UbW`ž`g]W`a`]h`XYa`B`Yi`ni`[`Ub[`x`Uc
DU`\]b`\U`c`XYf`Ub`XYfYb`Gd]Y`Yfb`]b`XYf`5`W`hYf!Dcg]h]cb`ni
a`YggYb"8]YgY`9`bhgW`Y]Xi`b[`k`ØfXY`Y`XcW`U`i`W`i`ba`]hhY`V`UfY
?`cbgYe`i`YbnYb`ZØf`Ub`XYfY`Gd]Y`Yfž`]bgVYgcbXYfY`@Ycb`;`cfYhn`Už
bUW`g]W`n]Y`Yb"

8`Ug`Xf]hhY`i`bX`a`Ò[`]W`Yfk`Y]gY`J`YfhfU[`g]bY[`Uh]j`ghY`GnYbUf]c
ghY`h`Y]bYb`J`Yf`_`Ui`Z`XYg`Gd]Y`Yfg`XUf" `Gc`h`Y`XYf`:`7`6`UmYfb`_`Y]bY
9]b[]i`b[`ØVYf`Y]bY`;`Y`\U`hgYf`\`Ø`i`b[`Yfn]Y`Yb`_`ÒbbYbž`_`ÒbbhY`Y]b
HfUb`gZf`]a`Gca`a`Yf`]b`6`YhfUW`h[`Ync[`Yb`k`YfXYb"8]YgYf`GW`f]hh
k`ØfXY`XYb`A`ØbW`bYfb`Yfa`Ò[`]W`Ybž`Y]bY`Ub[`Ya`YggYbY
5V`ÒgYgi`a`a`Y`ni`g]W`Yfb`i`bX`XYb`?`UXYf`k`Y]hYf`ni`j`Yf`Øb[`Yb"

8]Y`5`i`gk`]f`_`i`b[`Yb`U`i`Z`X]Y`;`Ya`Y]bgW`UZh
i`bX`X]Y`:`Ubg

:`Øf`X]Y`;`Ya`Y]bgW`UZhi`bX`X]Y`:`Ubg`XYg`:`7`6`UmYfb`]gh`X]YgYf
DfcnYgg]j`cb`Ybcfa`Yf`6`YXYi`hi`b[`"?]a`a`]W`]gh`Y]bY
⇒X`Yb]Z]_`Uh]cbgZ[]i`f`i`bX`gY]b`J`YfV`Y]V`c`XYf`gY]b`K`Y[]Ub[`_`ÒbbhY
XUg`ZUbUh]gW`Y`Di`V`]i`a`ghUf`_`VYY]bZi`ggYb"9]b`a`Ò[`]W`Yf
J`Yf`_`Ui`Z`k`]fX`j`]Y`Y]W`h`b]W`h`bi`f`U`g`J`Yf`i`gh`Y]bYg`gdc`fh`]W`Yb
HU`Yb`hg`Ub[`Yg`Y`Ybž`gcbXYfb`U`i`W`U`g`GW`k`ÀW`i`b[`X`Yg
Ya`ch]cbU`Yb`6`Ub`XYg`nk`]gW`Yb`XYa`J`YfY]b`i`bX`gY]bYb
5b`\`Ab[`Yfb"

:`Un]h.`9]bY`Ub[`Ygd`Ub`b`hYb`D`\`UgY`ZØf`XYb`:`7
6`UmYfb

8`Yf`:`7`6`UmYfb`VYZ]bXYh]g]W`]b`Y]bYf`_`f]h]gW`Yb`D`\`UgYž`]b`XYf
gck`c`\`X]Y`9`bhgW`Y]Xi`b[]j`cb`x`g`i`U`?]a`a`]W`U`g`U`i`W`X]Y

F YU_h]cbYb`XYf`J YfY]bgZØ\fi b[`i bX` : Ubg`j cb`YbHgWXY]XYbXYf
6YXYi hi b[`g]bX`"8]Y`_ca a YbXYb`K cWXYb`k YfXYb`nY][Ybž
k Y`WXYb`K Y[`XYf`J YfY]b`Y]bgW`À[hi bX`k]Y`g]W`X]Yg`Ui Z`X]Y
A UbbgW`UZh`i bX`X]Y`ni _ØbZh][Y`GU]gcb`Ui gk]f`Yb`k]fX`"8 Ug
H\Ya U`?]a a]W`V`Y]Vh`V]g`ni f`YbX[Ø`h][Yb`9bHgWXY]Xi b[`Y]b
j]Y`gW]W`h][Yg`i bX`gdUbbYbXYg`H\Ya Už`XUg`<c\Y`K Y`Yb
gW`U[Yb`_ØbbhY"

8]Y`9bHk]W`_i b[`]b`X]YgYa`6YfY]W`]gh`U`gc`b]W`h`bi f`ZØf`XYb
J YfY]b`k]W`h][ž]gcbXYfb`\Uh`Ui W`h]YZfY`[YgY`gW`UZh]W`Y`i bX
Ya ch]cbU`Y`a d`_Uh]cbYb`ZØf`X]Y` : Ubg`j cb`6UmYfbg
FY`cfXa Y]ghYf`"9]bY`_`UfY`?ca a i b]_Uh]cb`ØVYf`X]Y`b`ÅW`ghYb
GW`f]hhY`_ØbbhY`XUni`VY]hfU[Ybž`X]Y`GdUbbi b[`]b`XYf
5b\Åb[YfgW`UZh`ni`j Yff]b[Yfb`i bX`J YfhfUi Yb`]b`X]Y`gdcfh]W`Y
8]fYWh]cb`ni`gW`UZZYb"

· · B 5 ;

8 YhU]`g

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