

K UbXYfZØ\ fYf'ni a '< Ufhn'DYU_ž HUga Ub]Yb

9]b'Ui gZØ\ f']WXYf'K UbXYfZØ\ fYf'ni a ' ;]dZY`XYg'< Ufhn'DYU_
]a '< Ufhn'A ci bhU]bg'B Uh]cbU`DUf_ž'HUga Ub]Yb"K]Y'G]Y'ni a
5i g[Ub[gdi b_h'XYg'K UbXYfk Y[g'[Y`Ub[Ybž'k Ug'G]Y
Yfk UfhYhi bX': chc'g'j cb'i bgYfYa
GcbbYbUi Z[Ub[ggdUn]Yf[Ub['ni a '< Ufhn'DYU_"8Yf'< Ufhn
DYU_]gh'a]h'%&) ' 'A YhYfb'XYf'\ÖW ghY'Di b_h'XYf'< Ufhn!
; YV]f[g_YhhY'a 'GØXYb'HUga Ub]Ybg"9]bY'Y]bZUWXY
Ni ZU\fhgghfU»Y]b'?ca V]bUh]cb'a]h'Y]bYa '[i h'Ui g[YVUi hYb
K Y['a UWXYb'X]YgY';]dZY`k UbXYfi b['YXcW'ZØf'j]Y'Y'ni
Y]bYf'gY\ f'a UWVUfYb'A]gg]cb" ð'X]YgYa '6`c[VY]hfU['\cZZ
]Wž'G]Y'a]h'U`Ya 'Ui gni ghUhhYbž'k Ug'G]Y'k]ggYb'a ØggYbž
i a 'XYb'< Ufhn'DYU_'K U`_ni a ' ;]dZY`ni 'k UbXYfb" ðW '\UVY
Ui W'Y]b][Y': chc'g'j cb'i bgYfYf'GcbbYbUi Z[Ub[gk UbXYfi b[
]a 'K]bhYf' / Ua d^Y`]d/

9]b'Ui gZØ\ f']WXYf'K UbXYfZØ\ fYf'ni a ' ;]dZY`XYg'< Ufhn'DYU_]a
< Ufhn'A ci bhU]bg'B Uh]cbU`DUf_ž'HUga Ub]Yb"K]Y'G]Y'ni a
5i g[Ub[gdi b_h'XYg'K UbXYfk Y[g'[Y`Ub[Ybž'k Ug'G]Y Yfk UfhYh
i bX': chc'g'j cb'i bgYfYa 'GcbbYbUi Z[Ub[ggdUn]Yf[Ub['ni a '< Ufhn
DYU_"

8Yf'< Ufhn'DYU_]gh'a]h'%&) ' 'A YhYfb'XYf'\ÖW ghY'Di b_h'XYf'< Ufhn!
; YV]f[g_YhhY'a 'GØXYb'HUga Ub]Ybg"9]bY'Y]bZUWXY
Ni ZU\fhgghfU»Y]b'?ca V]bUh]cb'a]h'Y]bYa '[i h'Ui g[YVUi hYb'K Y[
a UWXYb'X]YgY';]dZY`k UbXYfi b['YXcW'ZØf'j]Y'Y'ni 'Y]bYf'gY\ f'
a UWVUfYb'A]gg]cb"

ð'X]YgYa '6`c[VY]hfU['\cZZ']Wž'G]Y'a]h'U`Ya 'Ui gni ghUhhYbž'k Ug
G]Y'k]ggYb'a ØggYbž'i a 'XYb'< Ufhn'DYU_'K U`_ni a ' ;]dZY`ni
k UbXYfb" ðW '\UVY'Ui W'Y]b][Y': chc'g'j cb'i bgYfYf'
GcbbYbUi Z[Ub[gk UbXYfi b[']a 'K]bhYf'VY][YZØ[hžj cb'XYbYb']W

\c ZYž'XUgg'g]Y'G]Y'XUni']bgd]f]YfYb'k YfXYbž'X]YgYb
i b['Ui V']WXYb'hUga Ub]gWXYb'B Uh]cbU`dUf_'ni' VYgi WXYb"

- 'U'h1 < 5F HN' @5? 9'H5GA 5B ⇒B 2
- 'U'h1 G7< B 99698 97? H9'GD#HN9'H5GA 5B ⇒B 2
- 'U'h1 < 5F HN'D95? 'H5GA 5B ⇒B ž< 5F HN'G99 2

K c']gh'X]Y' < Ufhngd]hnY 3'

8Yf' < Ufhn'DYU_']Y[h'a' < Ufhn!A ci bhU]bg!B Uh]cbU`dUf_']a' GØXYb
HUga Ub]Ybgž'Yhk U', * '?'`ca YhYf'j cb' < cVUfh'YbhZYfbh" 8Yf
5i g[Ub[gdi b_h'ni a' ;]dZY`VYZ]bXYh'g]WXY'Ua' '9bXY'XYf' < Ufhn
FcUXž'k c'g]WXY'Ui WXY'Y]b' i bVYgYhnhYg'6Ygi WXYfnYbhfi a' i bX
Ui gfY]WXYbX'DUf_d`ÀhnY'ZØf'V]g'ni' '&\$': U\fnYi [Y'VYZ]bXYb"

; cc['Y'A Udg'D]b.' < Ufhn'DYU_'HfUW_'

I 'h]a Uh]j Y'hUga Ub]gWXY'F Y]gYfYggci fW

⇒W '\c ZYž' ⇒bYb' [YZÀ`h'X]YgYf'6'c[VY]hfU["J YfdUggYb'G]Y'ZØf
k Y]hYfY'F Y]gY!' i bX'5VYbhYi Yf]bgd]fUh]cbYb'Xi fW'HUga Ub]Yb
b]WXYh'a Y]bY'i 'h]a Uh]j Yb'; i]XYg'i bhYb"

'* &'Yd]gWXY'5_h]j]hÀhYb']b'HUga Ub]Yb'
, VYfbUWXYhi b[ga Ò['WXY_Y]hYb']b'HUga Ub]Yb'fVYghY'c fhYŁ' ' & *
YfghUi b']WXY'K UggYfZÀ`Y]b'HUga Ub]Yb' ' ') 'A i gh!Xc!
K UbXYfi b[Yb']b'HUga Ub]Yb

5bZU\fh'ni a' < Ufhn!A ci bhU]bg!B Uh]cbU`dUf_

@Y]XYf' []Vh'Yg'_Y]bY'cf[Ub]g]YfhYb'Hci fYb'cXYf'ØZYbh]WXYb
J Yf_Y\fga]hY'ž'X]Y']bg' < Ufhn[YV]f[Y'ZØ\ fYb" 8U\Yf']gh'X]Y'Y]bn][Y
A Ò['WXY_Y]hž'XYb'5i g[Ub[gdi b_h'XYg'K UbXYfk Y[g'ni' YffY]WXYbž
gY'Vgh'\]Yf\Yf'ni' ZU\ fYb'cXYf' ⇒f'; 'ØW_dYf'5b\U'hYf'j cb
; YYj Yghcb'Ui g'ni' j Yfgi WXYb"

8Ug`]Y[h'XUfUbž'XUgg'G]Yž'Y[U'Ui g'k Y'WXYf'F]WXYhi b['G]Y
_ca a Ybž'ni Yfgh']b'F]WXYhi b[; YYj Yghcb'ZU\ fYb'a ØggYb" 8cfh

Ub[Y_ca a YbžZc`[Yb`G]Y`XYb`GW`]XYfb`]b`F]W`hi b[`< Ufhn
A ci bhU]bg`i bX`HU\i bY`5Xj Ybhi fYg`V]g`ni f`5fj Y`F cUXžX]Y
Ugd\U`h]Yfh`]gh"

9hk U`%&`?]`ca YhYf`X]Y`_i fj YbfY]W`Y`5fj YghfU»Y`\cW`gY`Yb`G]Y
Y]bY`5Vnk Y][i b[`]b`X]Y`< UfhngfU»Y`fi bVYZgh][hĚ`5`g`b`ÀW`ghYg
Zc`[Yb`G]Y`X]YgYf`GhfU»Y`Yhk U`%(`?)`ca YhYf`V]g`ni a`9bXYž`k c
g]W`Y]bY`[fc»Y`K YbXYVi W`hi bX`Ui gfY]W`YbX`DUF_d`ÀhnY
VYZ]bXYb"

8]Y`GhfU»Y`\]bUi Z]bg`< Ufhn[YV]f[Y`]gh`i bVYZgh][hž`UVYf`[i h
[Yghi Zh`5VYf`XYb_Yb`G]Y`XUfUbž`XUgg`Yg`ghY`]`]gh`i bX`XYf
K]bhYfZfcgh`Yg`gY`f`fi hgW`][`a UW`Yb`_Ubb"

K]f`gW`UZZhYb`Yg`c`bY`DfcV`Ya Yž`i bgYfYb`[fc»Yb`J Ub`Xcfh\]b`ni
Vf]b[Yb"

U`h1` <5FHN`GD#HN9`I B8`<5FHN`G99`2
K Ybb`G]Y`X]Y`k i bXYfgW`ObY`FY[]cb`gØX`]W`j cb`<cVUfh
Yf_i bXYb`a`ÒW`hYbž`UVYf`_Y]b`Y][YbYg`HfUbgdcfha`]hhY`\UVYbž
_Ubb`]W``ÀbYb`ghUhhXYggYb`X]YgY`[Ubnh`À[][Y`Hci f`UV`<cVUfh
Ya dZY`\`Yb"

9g`i a ZUggh`Y]b][Y`XYf`VYghYb`5_h]j]h`hYb`]a`GØXYbž`k]Y`XYb
HU\i bY`5]fK U`_i bX`X]Y`< Ugh]b[g`7Uj Yg"

GW`YW_dfY]g.`GØX`]W`Y`HUgg]Y!; UbnhU[Yg!5VYbhYi Yfhci f`ni a
HU\i bY`5]fK U`_i bX`ni`XYb`< Ugh]b[g!<Ò`\`Yb"

J 9FK 5B8H9F`DCGH.`&`*`hc`Y`8]b[Yž`X]Y`a Ub`]b`<cVUfh
i bhYfbY`a Yb`_Ubb`

8]Y`< Ufhn[]dZY`k UbXYfi b[`

K UbXYfghfYW_Y.`; `_a`\]b`i bX`ni fØW`fN]b`i bX`ni fØW`Ě`
8Ui Yf.`C Z]n]Y`Y`NY]h`(`Ghi bXYbA Y]bY`Ya dZc`\`YbY`NY]h`&ž)
Ghi bXYb
<Ò\Y.`) %-`A YhYf`; YgUa h\Ò\Ybi bhYfgW`]YX<Ufhn`DYU_.`%&ž)``A
5A G@

GWk]Yf[_Y]hg[fUX. 'A]hY''

8 Ug'Hc``Y'Ua' < Ufhn'DYU_'K U'_]ghž'XUgg'g]Wk'X]Y'< Ufhn'F cUX'XYb
[Ubnyb'6Yf['\]bUi Z'gWk'Ab[Y'h'i bX'Y]bYb'Y]bZUWkYb'Ni [Ub['ni a
;]dZY''V]YhYhž'XYf'bi f' ('?']ca YhYf'YbhzYfbh]gh'' ð'6Yni ['Ui Z
5bgfYb[i b['i bX'6Y'c\bi b[']gh'X]Y'< Ufhn'DYU_'!K UbXYfi b['Y]bY
XYf'VYghYb']b'HUga Ub]Yb"

J cb'cVYb'\UVYb'G]Y'Y]bYb'6']W_'Ui Z'U'd]bY'6Yf[gYYb'i bX'GYbž
k Å\fybX'G]Y'Ui ZXYa '\ÒWkghYb'Di b_h'XYf'< Ufhn_YhhY'ghY\Yb"
<]bhYf' ðbYb'ØVYfV']W_Yb'G]Y'XUg'fUi Y'i bX'i bj YfgÒ\b']WkY'K cf'X
< Yf]hU[Y'K]'XYfbYgg'5fYU'XYg'Gci h\k Ygh'BUh]cbU''DUf_'i bX
Yf\UgWkYb'gc [Uf'Y]bYb'6']W_'Ui Z'XYb': YXYfUh]cb'DYU_"

CVk c\`X]YgY'GhfYW_Y'fYWk'h'Y]bZUWk']gh'i bX'dfcV`Ya `cg']b'Yhk U
nk Y]Y]b\U'V'Ghi bXYb'VYk Å'h][h'k YfXYb'_Ubbž']gh'Yg'k]Wk]h['ni
Yfk Å\bYbž'XUgg'g]Y'g]Wk']b'Y]bYa 'U'd]bYb'; YV]Yh'VYZ]bXYh''8 Ug
VYXYi hYhž'XUgg'YXYfnY]h[YZÅ\`f']WkYg'K YhYf'\YfY]bVfYWkYb
_Ubb"'A YbgWkYb'g]bX'Xcfh'XfUi » Yb'Ub'XYf'? Å'hY'[YghcfVYb"'9g
[]Vh'Ui W'Y]b'V]ggWkYb'VYf[Ui Z'a]h'5VgWk]hhYbž'X]Y'Yhk Ug'ghY'
g]bX'i bX'ja 'K]bhYf'cZh'a]h'GWk bYY'VYXYW_h'gY]b'_ÒbbYb"

8 U\Yf']gh'Yg'Ua' VYghYbž' ðfY'K UbXYfi b[Yb'YbhgdFYWkYbX'ni
d'UbYb'i bX'X]Y'k]Wk]h[ghYb'U'd]bYb'8]b[Y'k]Y'ni gÅhn']WkYg
K UggYfž'k Ufa Y'?`Y]Xi b[ž'Y]bY'k UggYfX]Wk'hY'GWk]Wk'h'i bX
a Ò[']WkYfk Y]gY'gc [Uf'Y]b'GUhY''hYbhY'YZc'b'a]hni bY\ a Yb'f]Wk
\UVY'ja a Yf'a Y]b' ðFYUWk'a]b]'XUVY]t"
U'h1 < 5FHN'G99'JCA' < 5FHN'D95?'K 5@? 2

J 9FK 5B8H9F'DCGH.'@Y]hZUXYb'ZØf'XYb'6Ygi Wk'XYg'F UbXYg'XYf
K Y'h

5i g[Ub[gdi b_h'ni a '@U_Y'9gdYfUbW

8 Yf'5i g[Ub[gdi b_h'XYg'K UbXYfk Y[g'ni a' < Ufhn'DYU_'VY[]bbh
bVYb'XYf'6Ygi WkYf\ØhY'Ua' 9bXY'XYf'< Ufhn'F cUX''9g[]Vh'Y]b
V'Ui Yg'HUga Ub]Ub'DUf_g!GWk]Xž'XUg'XYb'K Y['k Y]gh"

8Yf`YfghY`5VgW`b]h`_Ubb`Yhk`Ug`gW`Ua`a`][`k`YfXYbž`UVYf`XUg`
XUi`Yfh`b]W`h`_Ub`[`Y`"8]Y`GhfYW`_Y`k`i`fXY`_Øfn`]W`_a`cXYfb]g]Yfh`i`bX`
Yg`[`]Vh`Y]bYb`<c`nghY[`ž`XYf`V]g`ni`a`_`6Y[`]bb`XYg`5i`Zgh]Y`[`g`Ui`ZXYb`
<Ufhn`DYU`_`ZØ`fh`"8`Ug`a`UW`h`X]YgY`K`UbXYfi`b`[`gY`f`Ub`[`YbY`a`
i`bX`gW`cbh`Ui`W`_X]Y`Ya`dZ]bX`]W`Y`5`dYbj`Y`[`YhUh]cb`XUfi`bhYf`
U`h1`<5FHN";`Ð: 9@K`5B89FI`B;`2`

B`UW`_i`b`[`Y`Z`Å`f`%ž)`_`a`_`YffY]W`Yb`G]Y`Y]bY`;`UVY`i`b`[`ž`X]Y`ni`a`
@U`_Y`9gdYfUbW`_ZØ`fh`"8]Yg`]gh`Y]b`k`i`bXYfgW`ØbYf`5`dYbgYY`a`]h`
Y]bYa`_`<c`nghY[`ž`XYf`V]g`ni`a`_`F`UbX`Zc`fh[`YgYhnh`k`]fX`" <]Yf`[`]Vh`Yg`
Y]b`dUUf`6Åb`_Yž`Ui`ZXYbYb`a`Ub`g]W`_`b]bgYhnYb`i`bX`X]Y`5i`gg]W`h`
[`Yb]Y»`Yb`_Ubb`"8`U`k`]f`ZfØ`_ni`a`_`GcbbYbUi`Z[`Ub`[`_Ui`Z[`YVfcW`Yb`
g]bXž`Z`_`fYb`k`]f`k`Y]hYf`Ua`_`@U`_Y`9gdYfUbW`_j`cfVY]`i`bX`a`UW`hYb`
Ui`ZXYa`_`F`ØW`_k`Y`[`_Y]bYb`Nk`]gW`Ybghc`dd`
U`h1`<5FHN!69F;`9!GC`BB`9B5I`.;`5B;`_`B`H5GA`5B`→B`2`

@UX]Yg`HUfb`ni`a`_`<Ufhn`DYU`_`

9]bYb`k`Y]hYfYb`?`]`ca`YhYf`XYb`a`U`Yf]gW`Yb`6cUfXk`U`_!DZUX`
`]bi`bhYf`fMY]`gW`ØbYa``K`YhYf`f`[`]Vh`Yg`Y]bYb`k`Y]hYfYb`5VghYW`Yf`
bUW`_@UX]Yg`HUfb`"9]b`6Yf[`gY`Y]gh`Y]bY`5fh`_Y]bYf`5`dYbgYY`
8]YgYf`VYgcbXYfY`GYY`_Uh`Y]bY`gY`f`_i`fnY`l`a`_Y]hi`b`[`ggW`_Y]ZYž`
k`Ug`VYXYi`hYhž`XUgg`k`]f`_`b`i`a`[`Y`Yb`i`bX`k`Y]hYf`]b`F]W`hi`b`
<Ufhn`DYU`_`ZU`fYb`_`ØbbhYb`"

U`h1`G99`9GD9F`5B`79`2`

K`Ybb`G]Y`k`Y]hYf[`Y`Ybž`YbXYh`XYf`gUbZhY`<c`nghY[`_`bi`f`k`Yb][`Y`
`i`bXYfh`A`YhYf``]bhYf`@UX]Yg`HUfb`"8Yf`K`Y`[`ghY][`h`XUbb`Ui`ZY]bYf`
gW`a`U`Ybž`ZY`g][`Yb`F`ci`hY`Ub`i`bX`YffY]W`h`XYb`GUhhY`ž`XYf`U`g`
<Ufhn`DUgg`VY`_Ubbh`]ghž`X]fY`_h`bYVYb`XYa`_`<Ufhn`DYU`_"8]YgYf`
5VgW`b]h`_UhY`gY`f`h]YZb`GW`bYYž`U`g`k`]f`_`b`VYgi`W`hYbž`XU`Yf`
Xi`fW`_X]Y`<Ufhn`F`Ub`[`Y`j`cf`XYb`F`cUf]b`[`(``\$g`[`YgW`Øhnh`]ghž`X]Y`
Xi`fW`_XYb`Gci`h`k`Ygh`B`Uh]cbU`DUf`_`gW`fY]Yb`"

U`h1`<5FHN!GD#HN9`2`

5`g`k`]f`XYb`<UfhdUgg`YffY]W`hYbž`k`i`fXYb`k`]f`gcZc`fh`j`cb`X]YgYb`
VYfØW`h][`hYb`K`_]bXYb`[`YhfcZZ`b`" <]Yf`Yf`U`hYb`G]Y`Ui`W`_X]Y`YfghYb`
5i`gV`]W`_Y`Ui`ZXY`Y`K`_]Xb]g`XYg`Gci`h`k`Ygh`B`Uh]cbU`DUf`_"`i`bX`
k`Ybb`G]Y`;`_ØW`_a`]h`XYa`_`K`YhYf`_UVYbž`_ØbbYb`G]Y`XYb`
:`YXYfUh]cb`DYU`_]b`XYf`:`YfbY`gY`Yb`"

U`h1`<5FHN";`Ð: 9@K`5B89FI`B;`2`

U`h1 <5FHN!; Ð: 9@K 5B89FI B; 2

U`h1 2

5bg]Wk hYb`j`ca` ;]dZY`XYg`< Ufhn`DYU_

8Yf`5i`Zgh]Y[`ni`a``< Ufhn`DYU_`VY[]bbh`b_g`fbØX`]Wk`E`XYg`DUggYg"
G]Y`gY\Yb`[YghUdY`hY`GhY]b\Ui`ZYbž`X]Y`XYb`K`Y[`ni`a` ;]dZY`
a`Uf_]YfYb``8Yf`K`Y[`bUWk`cVYb`]gh`hUhg`ÅWk`]Wk`gY\f`[i`h
[YgWk`b]hnhž`a`]h: Y`gYbž`X]Y`gc`d`Uhn]Yfh`g]bXž`XUgg`XUg`?`YhhYfb
ni`a`?]bXYfgd]Y`k`]fX``5`YfX]b[g`_ØbbhY`]Wk`a`]f`j`c`fghY`Ybž`XUgg
Yg`VY]`ghUf`_Ya`G`Wk`bYYZU``Yhk`Ug`gWk`]Yf][`i`bX`fi`hgWk][`k`YfXYb
_ØbbhY"

U`h1 <5FHN!GD#HN9`A`K`B`H9F`2

K`Ybb`G]Y`cVYb`Ub[Y`_ca`a`Yb`g]bXž`k`YfXYb`G]Y`a`]h`Y]bYf
\Yf]`c`ffU[YbXYb`5i`gg]Wk`h`VY`c`b`h`I`ba`]hhY`VUf`]a`GØXYb
VYZ]bXYh`g]Wk`XYf`_cb]gWk`Y`Gbck`m`DYU_ž`Y]b`k`i`bXYfgWk`ØbYf`6Yf[ž
XYf`k`Å`fYbX`a`Y]bYg`K`]bhYfVYgi`Wk`g`b]Wk`h`VY`gcbXYfg
gWk`bYYVYXYW`h`k`Uf"

8]Y`j`]Y`Y]Wk`h`gWk`ØbghY`5i`gg]Wk`h]`gh`X]Y`XYg`< Ufhn!GYYg`]a
B`c`f`X`k`Y`gh`Y`b``5b`_`UfYb`HU[Yb`_ØbbYb`G]Y`Ui`Wk`XYb`GhY`]`Ub[`]b
XYf`: YfbY`]a`GØXYb`i`bX`X]Y`k`Y]h`Y`bhZYfbhYb`5fh`i`f`F`Ub[Yg`]a
K`YghYb`gY\Yb"

K`Y]hYfY` :`c`hc`g`j`ca``< Ufhn`DYU_

U`h1 <5FHN`@5?`9`H5GA`5B`9B`2

U`h1 G7<B9969897?`H9`GD#HN9`H5GA`5B`9B`2

U`h1 <5FHN`D95?`H5GA`5B`9B`2

U`h1 G7<B9969897?`H9`GD#HN9`H5GA`5B`9B`2

U`h1 <5FHN`G99`I`B8`<5FHN`D95?`H5GA`5B`9B`2

U`h1 <5FHN`D95?`H5GA`5B`9Bž`<5FHN`G99`2

U`h1 <5FHN!; Ð: 9@G`C`B`B`9`B`5`I` : ; 5B; GK 5B89FI B; 2

F`Ø`W`_`Y`f`ni`a``HfU]`YUX!DUf`_d`Uhn

B`U`W`X`Y`a`G]Y`X]Y`5i`gg]Wk`h`[YbcggYb`\UVYbž`_ØbbYb`G]Y
i`a`_Y`fYb`i`bX`XYb`[`Y]Wk`Yb`K`Y[`ni`fØW`_ni`a`DUf`_d`Uhn`[Y\Yb"

GY\Yb'G]Y'g]W'Ui Z'XYa 'K Y['i bVYX]b[h'@UX]Yg'HUfb'i bX'@U_Y
9gdYfUbW'Ubž'ZU`g'G]Y'Yg'bcW'b]W'h'[YhUb'\UVYb"

5i » YfXYa 'gW'U[Y'W'j cfž'VY]'XYf'F ØW_ZU\fh'Y]bYb
Nk]gW'Ybghcdd'VY]'XYb'5fj Y': U`g'Y]bni 'Y[Ybž'Y]bYa ' _i fnYb
, \$\$!A YhYf!F ØW_k Y['ni 'Y]bYa 'a U'Yf]gW'Yb' _Y]bYb'U'd]bYb
K UggYfZU`"
U'h1 5FJ9': Ÿ@@H'H5GA 5B →B 2 5fj Y!: Å`Y

I bhYf_ i bZh']b 'XYf' B Å\Y 'XYg' < Ufhn[YV]f[Yg

K Ybb'G]Y'bUW'XYf'<Ufhn!DYU_!K UbXYfi b['Y]bY'K Y]'Y]b'XYf
FY[]cb'i a ' ; YYj Yghcb'V'Y]VYb'a ØW'hYbž'\UVY'W' i bhYb'Y]b][Y
FYggci fW'b'j Yf]b_hž'i a ' ÆbYb'ni '\Y'ZYb"

8]Y'HU\i bY'5]fk U`_@X[YG]Y'k YfXYb'j]Y`Y]W'h'ØVYffUgW'h'gY]b
ni '\ØfYbž'XUgg'G]Y'hUhgÅW'W'VY]'HU\i bY'5Xj Ybhi fYg
ØVYfbUW'hYb'_ØbbYb"'9g'ghY\Yb'nU\`fY]W'Y'N]a a Yf'ni f'5i gk U\ž
j cb'GW'UZgÅ'Yb'a]h'9hU[YbVYhhYb'V]g'\]b'ni 'Gi]hYb'ZØf'X]Y'[UbnY
: Ua]]'Y"'Ni 'XYb'9]bf]W'hi b[Yb'[Y\ØfYb'Y]b'FYghUi fUbhž'Y]bY
; Ya Y]bgW'UZhg_ØW'Y'i bX'Y]bY'; Ya Y]bgW'UZhg'ci b[Y'gck]Y
_cgHbZfY]Yg'K @5B"'5`gcž'k Ybb'G]Y]b'XYf'; Y[YbX'g]bXž'k Ufi a
gW'Ui Yb'G]Y'g]W'b]W'h'HU\i bY'5Xj Ybhi fYg'Ub'i bX'ØVYfbUW'hYb
]b'XYf'@X[Y3

, VYfdfØZYb'G]Y'XYb'DfY]g'i bX'X]Y'J YfZØ[VUf_Y]h'ZØf' ÆfY
FY]gYXUHyb
U'h1 H5<I B9'@C8; 9 2

5bgcbghYb'[]Vh'Yg'Ui W'Y]b'dUUf'<chY`g'i bX'A chY`g']b'XYf
bÅW'gh[Y'Y[YbYb'; Ya Y]bXY'; YYj Yghcbž'X]Y'Y]b'[fc» Ufh][Yf
Nk]gW'Ybghcdd'bUW'XYa ' < Ufhn'DYU_'K U`_g]bX"'I bhYb']gh'Y]bY
? UfhYž'X]Y'G]Y'j Yfk YbXYb'_ØbbYbž'i a 'bUW'XYb'VYghYb
5b[YVchYb'ZØf' ÆfY'FY]gYXUHyb'ni 'gi W'Yb"

?`]W_Yb'G]Y'\]Yfž'i a 'X]Y'VYghYb'5b[YVchY'i bX'X]Y'J YfZØ[VUf_Y]h
j cb'N]a a Yfb']b'; YYj Yghcb'ni 'j Yf['Y]W'Yb

6cc_]b["Wca

A Y\ f'hUga Ub]gW\ Y'K UggYfZU``ZØ\ fYfž
K UbXYfi b[Yb'i bX'5VYbhYi Yf

⇒W\`cZZž'XUgg'G]Y'X]YgYb'gW\ bY``Yb'K UbXYfZØ\ fYf'ni a' < Ufhn
DYU_']b'HUga Ub]Yb'bØhn`]W\`ZUbXYb"K Ybb'⇒ bYb'XYf'< Ufhn!
A ci bhU]bg!B Uh]cbU`dUf_[YZU``Yb'\Uhž'gc``hYb'G]Y'g]W\`i bVYX]b[h
Y]b][Y'XYf'UbXYfYb'K i bXYf'HUga Ub]Ybg'UbgY\Yb"

⇒W\`UVY'a Y\ fYfY'A cbUhY'XUa]h'j YfVfUW\hž'ni`k UbXYfb'i bX
Y]b][Y'XYf'VYghYb'; Y[YbXYb'HUga Ub]Ybg'ni`Yf_i bXYbž'i bX'j]Y`Y
XUj cb'k YfXYb`]b'X]YgYa`6`c[`j`cf[YghY``h`GW\Ui`Yg'X]f'Ub°

"

8YhU]`g

6Ygi W\Yb'G]Y'i bg'Ui Z.`Y]bY!fY]gY"XY