

@]hYfUf]gWXY`?`Ugg]_Yf.`I`bj`Yf[`Ygg`]WXY
K`Yf_Yž`X]Y`]bgd]f]YfYb

9bhXYW_Yb`G]Y`&\$`nY]h`cgY`F`ca`UbYž`X]Y`YXYf`@YgYf
a`]bXYghYbg`Y]ba`U`]a`@YVYb`Yf`YVYb`gc``hY`Y]b`A`i`gh!FYUX
ZØf`@]hYfUhi`fVY[`Y]ghYfhY`°

8]Y`nY]h`cgY`6YXYi`hi`b[`_`Ugg]gWXYf
@]hYfUhi`f

@]hYfUhi`f`\Uh`X]Y`?`fUZhž;`YbYfUh]cbYb`ni`]bgd]f]YfYb`i`bX`ni`a
BUWXYb_Yb`Ubni`fY[`Yb"J]Y`Y`K`Yf_Y[`Y`hYb`U`g`i`bj`Yfn]W`hVUf`ZØf
XUg`J`Yfgh`AbXb]g`j`cb`?`i`hi`f`i`bX`;`YgY``gW`UZh`J`cb`:`UbhUg]Y`ØVYf
[`YgY``gW`UZh`]WXY`H\Ya`Yb`V]g`\]b`ni`f`YI`d`c`f`Uh]j`Yb`GW]YbW!
:]W]cb`[`]Vh`Yg`6ØW`Yfž`X]Y`]b`U`Y`9dc`W`Yb`fY]W`hYb`i`bX`X]Y
Ya`ch]cbU`Y`gck`]Y`]bhY``Y`_hi`Y``Y`@UbXgW`UZh`dfÄ[`hYb"

?`i`hi`fY``Y`i`bX`[`YgY``gW`UZh`]WXY`F`YZ`YI`]cb

9]bk`UbXZFY`]gh`X]Y`F`c``Y`XYf`@]hYfUhi`fž`k`Ybb`Yg`XUfi`a`[`Y\`hž
_f]h]gWXY[`YgY``gW`UZh`]WXY`H\Ya`Yb`ni`VY`Yi`W`hYb"9]b`6Y]gd]Y``]gh
F`YVY`]i`b`Yb`U`[`fUb`U`]`j`cb`;`Ycf[`Y`C`fk`Y``"8]YgY`:`UVY`bi`hnh
H]YfYž`i`a`a`YbgW`]WXY`GW`k`ÄW`Yb`ni`fYZY`_h]YfYbž`i`bX`gd]Y[`Y`h
gca`]h`X]Y`9fY][`b]ggY`XYf`fi`gg]gW`Yb`F`Yj`c`i`h]cb`k`]XYf"8]Y
9fn`Ä`i`b[`nY][`h`Ui`Zž`k`]Y`A`UW`hi`bX`?`cffi`dh]cb`X]Y`≠YU`Y`Y]bYf
F`Yj`c`i`h]cb`i`bhYf[`fUVYb`_ØbbYb"

8]Y`?`fUZh`XYf`GdfUWXY`]b`\`YfUi`gZcfXYfbXYb
NY]hYb

A`Uf`_i`g`Ni`gU`_g`@U``UX`fcbU`XY``]Vfcg`gh`Y]b`Y]bXf]b[`]W`Yg

6Y]gd]Y`Z0f`X]Y`Ya ch]cbU`Y`H]YZYž`X]Y`@]hYfUhi f`YfnYi [Yb`_Ubb"
9fnÅ\`h`Ui g`XYf`DYfgdY_h]j Y`XYf`HcXž`ZÅb[h`X]Y` ; YgW]W]hY`X]Y
GW]fY_W_Yb`XYg`B Un]fY []a Yg`Y]b`" <]Yf`k]fX`XYi h`]W]ž`k]Y`k]W]h][
K cfhY`g]bXž`i a` < cZ]bi b [`]b`Y]bYf`X0ghYfYb`FYU`]hÅ`h`ni`]Z]bXYb"
@]YgY`ž`X]Y`DfchU[cb]gh]bž`nY][hž`XUgg`@]hYfUhi f`Ui W]`Y]bY` : `i W]h`]b
Y]bY`VYggYfY`K Y`h`gY]b`_Ubb"

: UbhUgh]gW]Y`K Y`hYb`i bX`] \ fY`@Y_h]cbYb

⇒ `?cbhfUghini`gW]k YfYfYb`H\Ya Yb`V]YhYh`>F`F`" `Hc`_]Yb`a`]h` 8Yf
<cVV]h`Y]bY`FY]gY`]b`ZUbhUg]Yj c`Y`K Y`hYbž`X]Y`b]W]h`bi`f
5VYb`hYi Yfž`gcbXYfb`Ui W]`a`cfU`]gW]Y`@Y_h]cbYb`V]YhYh`"8Yf
i bYfk UfhYhY`<Y`X`6`]Vc`6U[[]bg`nY][hž`XUgg`A`i`hi`bX
9bhgW]`cggYb`Y]h`bch`k`YbX][`]g]bXž`i a` < YfUi`gZcfXYfi`b[Yb`ni
a`Y]ghYfb"

8]Y`Xi b`_`Yb`5V[f0bXY`XYf`a`YbgW]`]W]Yb
BUhi`f

6YgcbXYfg`Y]bXfi`_g]c``]gh`X]Y`5i`gY]bUbXYfgYhni`b[`a`]h`XYb
5V[f0bXYb`XYf`a`YbgW]`]W]Yb`BUhi`f`]b` @c`]hU` `]cb`J`UX]a`]f
BUVc`_cj`i`bX` : fUb`_YbghY]b` `]cb`A`Ufm`G\Y`Ym`"K`Å`fYbX
BUVc`_cj`X]Y`CVgYgg]cb`Y]bYg`A`UbbYg`a`]h`Y]bYa` `?]bX`XUfghY`hž
VYgW]fY]Vh`G\Y`Ym`X]Y`GW]0dZ] b [`Y]bYg`K`YgYbg`i`bX`X]Y
?cbZfcbhUh]cb`a`]h`XYf`Y][YbYb`J`YfUbhk`cfhi`b[``6Y]XY`K`Yf`_Y`g]bX
\YfUi`gZcfXYfbX`i`bX`nk`]b[Yb`X]Y`@YgYfž`0VYf`9h_]i`bX`A`cfU`
bUW]ni`XYb`_Yb"

; YgY`gW]UZh`]W]Y`J`YfÅbXYfi`b[Yb`i`bX
8i`fW]Vf0W]Y

8]Y` ; YgW]W]hYb`]cb` A`i`YfW]hUg` `]cb`@ci`]gU`A`Um`5`W]ch`i`bX
`>]bY`9mfY` `]cb`7`\Uf`chY`6fcb`h0`fYZY_h]YfYb`XYb`?Ua`dZi`bX
XUg`GhfYVYb`bUW]`>XYb]hÅ`h`]cb` : fUi`Yb`]b`i`bhYfgW]YX`]W]Yb
[YgY`gW]UZh`]W]Yb`?cbZ][i`fUh]cbYb`"8]YgY`Fca`UbY`V]YhYb
9]bV`]W_Y`]b`]bhYfbY`?cbZ]_hY`i`bX`XYb`K`i`bgW]`bUW]
GY`Vghj`Yfk`]f`_]W]i`b[ž`k`Ug`g]Y`VYgcbXYfg`VYXYi`hYbX`Z0f`X]Y

ZYa]b]gh]gWXYb`GhfÒa i b[Yb`XYf`@]hYfUhi f`a UWXh"

?`Ugg]_Yf`U`g`Ni [Ub[`ni f`F YZ`YI]cb`ØVYf
i bgYfY`NY]h

8]Y`K Yf_YžX]Y`Yg`[YgWUZh`\UVYbž`XYb`HYgh`XYf`NY]hni
VYghY`Ybž]bX`b]WKh`bi f`HY]`XYg`hYfUf]gWXYb`?Ubcbgž`gcbXYfb
Ui W` : i bXUa YbhYž`Ui ZXYbYb`bYi Y`8Yb_k Y]gYb`Ui Z[YVUi h
k YfXYb`"G]Y`V]YhYb`9]bV`]W_Y`]b`a YbgW`]WXYg`J Yf`U`hYbž
; YgY`gWUZh`g_f]h]_i bX`dYfgÒb`]WXY`?Àa dZYžX]Y`Ui W`]b`XYf
`Yi h][Yb`NY]hj cb`6YXYi hi b[`g]bX"

: Un]h`i bX`XYf`K Y[`bUW`j cfb

8]Y`@Y`hØfY`gc`WXYf`K Yf_Y`_Ubb`b]WKh`bi f`i bhYf`U`hYbž`gcbXYfb
Ui W`Y]bY`YggYbh]Y`Y`F c`Y`]b`XYf`6]`Xi b[`i bX`XYf`_f]h]gWXYb
F YZ`YI]cb`ØVYf`i bgYfY` ; YgY`gWUZh`gd]Y`Yb`"8 Ug`J Yfgh`AbXb]g
X]YgYf`_Ugg]gWXYb`HYI hY`]gh`i bYf`Àgg`]Wž`i a`X]Y`J Yf`AbXYfi b[Yb
]b`XYf`@]hYfUhi f`i bX`X]Y`9bhk]W`_i b[Yb`a YbgW`]WXYb`8Yb_Ybg`ni
VY[fY]ZYb"

· · B 5;

8YhU]`g

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