

J Ub `xci fbU` `K cW\ Y` . `8 Yf` C ghYfUbghi fa

C \bY`bYi Y`9fZU\fi b[Yb`gW\`ÄZi`Yhk Ug`]b`i bg" `8]Y`6UmicZ
:]fYg`k Uf`[i h`ni `i bg`[Yk YgYb" `Ni `[i h" `K]f`[YbcggYb
dYfZY`_hYg`K YhhYfz`k Ä\fybX`i bj Yf[Ygg`]W\Y
GcbbYbi bhYf[Äb[Y`YXYb`5VYbX`VYggYf`k i fXYb" `8 Ug`6YghY`XUj
cb`Yf`YVhYb`k]f`]b`XYf`YhnhYb`BUW\hž`Y]b`dYfZY`_hYg`5i
FYj c]fž`VYj cf`k]f`X]Y`C gh_ØghY`Ybh`Ub[`k Y]hYfZi \fyb"
U`h1 / Ua d/ , &&\$/@CB9`65I A`GCBB9BI BH9F; 5B; `65M
C: : ₣9G`H5GA 5B ⇒B / Ua d/ , &&\$// [h/
U`h1 / Ua d/ , &&\$/6l 7<H`89G': 9l 9F!
GCBB9BI BH9F; 5B; G/ Ua d/ , &&\$// [h/K]f`\UhhYb`X]YgY`
K cW\ Y`9k][_Y]hYb`XUa]hj YfvfUW\hž`X]Y`VYghYb
K UbXYfk Y[Yž`K UggYfZÄ`Y`i bX`5hhfU_h]cbYb`ni `d`UbYb`i bX
ZYghni \U`hYbž`i a `g]Y`Ui Zi bgYfYf`FY]gY`Xi fW\`HUga Ub]Yb`ni
Xc_i a Ybh]YfYb" `ϕ`GUW\Yb`K UbXYfb`[]Vh`Yg`nk]gW\Yb`Gh"
<Y`Ybgi bX`XYa : fYmW]bYh!BUh]cbU`dUf`_b]W\h`U`ni `j]Y`Y
`Ub[Y`K Y[Y"/ Ua d^Y``]d/

C \bY`bYi Y`9fZU\fi b[Yb`gW\`ÄZi`Yhk Ug`]b`i bg"

8]Y`6UmicZ:]fYg`k Uf`[i h`ni `i bg`[Yk YgYb" `Ni `[i h" `K]f`[YbcggYb
dYfZY`_hYg`K YhhYfz`k Ä\fybX`i bj Yf[Ygg`]W\Y`GcbbYbi bhYf[Äb[Y
YXYb`5VYbX`VYggYf`k i fXYb" `8 Ug`6YghY`XUj cb`Yf`YVhYb`k]f`]b`XYf`
YhnhYb`BUW\hž`Y]b`dYfZY`_hYg`5i `FYj c]fž`VYj cf`k]f`X]Y`C gh_ØghY
Ybh`Ub[`k Y]hYfZi \fyb"

- U`h1 @CB9`65I A`GCBB9BI BH9F; 5B; `65MC: : ₣9G`H5GA 5B ⇒B 2
- U`h1 6l 7<H`89G': 9l 9F!GCBB9BI BH9F; 5B; G 2

K]f`\UhhYb`X]YgY`K cW\ Y`9k][_Y]hYb`XUa]hj YfvfUW\hž`X]Y`VYghYb
K UbXYfk Y[Yž`K UggYfZÄ`Y`i bX`5hhfU_h]cbYb`ni `d`UbYb`i bX
ZYghni \U`hYbž`i a `g]Y`Ui Zi bgYfYf`FY]gY`Xi fW\`HUga Ub]Yb`ni

Xc_i a Ybh]YfYb" : b GUWYb`K UbXYfb`[]Vh`Yg`nk]gWYb`Gh" < Y`Ybg
i bX`XYa` : fYmW]bYh!BUh]cbU`dUf`_`b]W`h`U`ni`j]Y`Y`Ub[Y`K`Y[Y"

9g`[UV`YXcW`Y]b`dUUf`<][\`][\hgž`XUfi bhYf`9j YfWfYYW` : U`g`i bX
XYf`5dg`Ym; cf[Y`HfUW`_"

9d]gWYf`UV[Y`Y[YbYf`7Ua`d]b[d`Uhn`]a
9j YfWfYYW` : cfYgh

K]f`Zc`[hYb`i bVYZYgh][hYb`<c`nZ`YfghfU» Yb`i bX`a UW`hYb`Y]bYb
5VghYWYf`j cb`Gh" < Y`Ybg`]b`F]W`hi b[`9j YfWfYYW` : cfYgh"
l fgdfØb[`]W`gc`hY`9j YfWfYYW` bi`f`Y]b`_i fnYf`6Ygi W`gY]bž`i a
XYb`K UggYfZU`i bX`X]Y`VYfØ`a hYb`K \]hY`?b][\hgž`5i ghfU`]Ybg
\ØW`ghY`k`Y» Y`?Ui [i a a]gž`ni`VYg]W`h][Yb"

5`g`k]f`YXcW`Ub`_Ua`Ybž`k i gghYb`k]fž`XUgg`k]f`a]bXYghYbg`Y]bY
BUW`h`V`Y]VYb`a i gghYb" `8 Ug`[YgUa`hY`F`YgYfj`Uh`]gh`Y]bY`_`Y]bY
@]W`hi b[`bYVYb`XYa`6UW`9j YfWfYYW`a`]h`A`UbbZUfbYb`i bX`cW`
Ui`ZfU[YbXYb` ; i a a]g`Ui`Z`U`Yb`GY]hYb" `8 Ug`6YghY`k`Ufž`XUgg`k]f
k`À`fYbX`XYf`[YgUa`hYb`8Ui`Yf`i`bgYfYg`6Ygi`W`g`j`Ø`][`U`Y]b
k`UfYb`i`bX`_Y]bY`A`YbgW`YbgYY`Y`ni` ; Yg]W`h`VY`_Ua`Yb"

9g`[UV`\]Yf`XfUi » Yb`Ui`W`_Y]bY`b`hYfbYhj`YfV]bXi`b[ž`k`Ug
VYXYi`hYhYž`XUgg`k]f`b]W`h`UV[Y`Yb`_h`k i fXYb`i bX`i`bg`Yf`Ui`VhYbž
XYb`A`ca`Ybh`Y]b`V]ggW`Yb`a`Y`f`ni`[Yb]Y» Yb"

- `U`h1` 6F I G< H5`@`DC`GGI`A``A`9J`9F`7F`997`<`GH5H9
: CF`9GH`2
- `U`h1` 75A`D`B; `5A`9J`9F`7F`997`<`: CF`9GH`F`9G9F`J`9`2
- `U`h1` 75A`D`B; `5A`9J`9F`7F`997`<`: CF`9GH`F`9G9F`J`9`2
- `U`h1` 9J`9F`7F`997`<`: Y`@@9ž`9J`9F`7F`997`<`GH5H9
F`9G9F`J`9ž`H5GA`5B`9B`2
- `U`h1` K`<`H9`?`B`÷`<`HG`K`5`@`?`9J`9F`7F`997`<`GH5H9
F`9G9F`J`9`2

5VgW`U`hYb`]b`6]W`Ybc

B UWX '9j YfWfYYWx 'UVgc 'j]YfhYb'k]f'Y]bY '_i fnY'K UbXYfi b['ja
8 ci ['Ug'5dg'YmBUh]cbU'DUf_žVYj cf'k]f']b'6]WXYbc'Ub\]Y'hYb"
8]YgYf'C fh']gh'dYfZY_h'ZØf'J Ub!@]ZYf'i bX'HUgg]Y!Hci fYfž'XU'Yf'U''Y
9]bf]Wx hi b[Yb'V]YhYhž'X]Y'G]Y'i bhYfk Y[g'VYbØh][Yb''8Uni
[Y\ØfhYb'\Y]» Y'8i gWXYbž'Y]b'GhfUbX'ni a 'GWxk]a a Ybž
8Ydcb]Ybž'HUb_ghY''Ybž'_cghYb'cgYg'Hf]b_k UggYfž'Gi dYfa Åf_hY
i bX'Y]bY'6ÅW_YfY]"

K]f'j YfvfUWx hYb'hUhgÅWx ']Wx 'Y]bYb' [Ubnyb'HU['XUa]hž'i bg'ni
YbhgdUbbYbž'Yhk Ug'5fVY]h'ni 'Yf'YX][Yb'i bX'i bg'i a 'U''X]Y
i bj Yfa Y]X']WXYb'5i Z[UVYb'ni '_Øa a Yfbž'X]Y'XUg'@YVYb']b'Y]bYa
J Ub'a]h'g]Wx 'Vf]b[h"

8 Ug'9]bn][Yž'k Ug'6]WXYbc'b]Wx h'\Uhž']gh'Y]b'_cghYb'cgYf
7Ua d]b[d'Uhn''6]g\Yf'\UhYb'k]f']b'i bgYfYb'nk Y]K cWXYb']b
HUga Ub]Yb'_Y]b'Y]bn][Yg'A U'ZØf'XUg'NY'hYb'VYnU\h''K]f'\UVYb
i bgYfYb'J Ub'gc' [YVUi hž'XUgg'Yf'j c''ghÅbX][']b'g]Wx ' [YgWx'cggYb
i bX'bYhni bUV\Åb[][']gh''BUhØf']Wx 'k c''hYb'k]f'i bgYfY
bYi [Yk cbbYbY'9][YbghÅbX][_Y]hj c''Ui gbi hnYb"

5bghUhh'\Y]a ']Wx ']b'6]WXYbc'ni 'dUf_Ybž'dUf_hYb'k]f'i bhYf'Y]bYf
6fØW_Y'X]fY_hUa '6Y[]bb'XYf'7c'Yg'6UmF cUX''8]Yg'k Uf'b]Wx h'bi f
Y]bY'ni ZÅ''[Y'6fØW_Yž'X]Y'k]f' [YZ bXYb'\UVYbž'gcbXYfb'Y]b
j cf[YgWx'U[YbYf'_cghYb'cgYf'7Ua d]b[d'Uhn']b'XYf'7Ua dYfa UhY!
5dd"

: fYmW]bYh!BUh]cbU'dUf_

8 Ug'bÅWghY' [fc»Y'N]Y''Ui Zi bgYfYf'@]ghY'k Uf'XYf': fYmW]bYh
BUh]cbU'DUf_'<]Yf'VYZ]bXYh'g]Wx 'X]Y'K]bY['Ugg'6Umž'j]Y''Y]Wx h
Y]bYf'XYf'VYfØ\ a hYghYb'GhfÅbXY'5i ghfU'Ybg''K Ug'i bg'YXcWx
a Y\ f']bhYfYgg]YfhYž'k UfYb'X]Y'Yd]gWXYb'K UbXYfa Ø[']Wx _Y]hYbž
X]Y'Ub[YVchYb'k i fXYb"

5b'YfghYf'GhY''Y'ghUbX'XYf'6Yf['5a cgž'XYf'k c\''XYf'VYghY
5i gg]Wx hgd i b_h']b'XYf'; Y[YbX']gh''@Y]XYf'k UfYb'k]f'Ub'i bgYfYa
YfghYb'HU[']b': fYmW]bYh'ghUf'_VYk Ø'_hž'U'gc'k UfhYhYb'k]f'V]g'ni a
nk Y]hYb'HU['Ui ZY]bY'Gi bf]gY!A]gg]cb'ni a ' ;]dZY''

K]f'k i fXYb'g]WYf'W'b]W'h'a]h'X]YgYa 'Ybhh'Ài gW'h"9]b'dYfZY_hYf
GcbbYbUi Z[Ub['Ua 'A cf[Yb'Yf\Y`hY'X]Y'5i gg]W'h'ØVYf'X]Y
<U'V]bgY`"K]f'\UVYb'Ui Z'XYa ' ;]dZY`X]Y'9bhgWY]Xi b['[YhfcZZYbž
: fYmW]bYh'Y]bY'[Ubni'K cWY`Ub['ni 'Yf_i bXYbž'i a 'XUg'6YghY
Ui g'X]YgYa 'i b['Ui V`]WYb'FY]gYn]Y`YfUi gni \c'Yb"
U'h1 A CI BH'5A CG'GCBB9B5I ; ; 5B; GK 5B89FI B; 2
U'h1 GCBB9B5I ; ; 5B; '5A 'A CI BH'5A CG'; ð: 9@ 2
U'h1 A CI BH'5A CG'K 5B89FI B; 2

8 Ya 'C ghYfhfi VY`YbhZ]Y\Yb

B UWXYa 'k]f'U`X]Y'X\Yf'i bhYfk Y[g[Y'YVhi bX'[YUfVY]hYh
\UVYbž'gY\Yb'k]f': Y]YfhU[Y'UbXYfg'U'g'X]Y'a Y]ghYb'UbXYfYb"
@Ub[Y'K cWYbYbXYbž]bgVYgcbXYfY']b'5i ghfU`]Ybž'VYXYi hYbž
XUgg'HUi gYbXY'j cb'A YbgWYb'i bhYfk Y[g'g]bXž'i a ']\fY
k c\j YfX]YbhYb'ZfY]Yb'HU[Y'ni 'bi hnYb"

: Øf'i bg'bY\ a Yb'k]f'i bg'bcfa U'Yfk Y]gY'X]Y'NY]hž'i bg'ni
j YfghYW_Yb'i bX'XYb'A UggYb'Ui gni k Y]WYb"K]f'_cbbhYb'nk Uf
Ui ZXYb'K UbXYfk Y[Yb'i bhYfk Y[g'gY]bž'UVYf'i bgYf'gW'YW'hYg
H]a]b['VY]'XYf'K U\`Y]bYg'XYf'j]Y`Y]W'h'VY`]YVhYghYb'Duf_g
HUga Ub]Ybg'VYXYi hYhYž'XUgg'k]f`]YVYf'XYb'C ghYfUbg'hi fa
UVk UfhYb'k c`hYbž'U'g'i bg'ZØf'X]Y'5i gg]W'h'Ui Z'X]Y'6Yf[Y
Ubni ghY`Yb"

ð'XYb'b'ÀW'ghYb'HU[Ybž'V]g'C ghYfb'j cfØVYf']ghž'k YfXYb'k]f'i bg
U'gc'ni fØW_\U'hYb'i bX'XUfUb'UfVY]hYbž'Y]b][Y`Àb[gh'ØVYfZ'À`][Y
ð\U'hY']b'X]YgYa '6`c['ni 'j YfØZZYbh]WYb"

B'ÀW'ghY'K cWY'd`UbYb'k]f'i bgYfY'YfghY'a Y\fh'À[][Y'K UbXYfi b[
]b'HUga Ub]Yb'Ui Z'XYa ' : fYmW]bYh'DYb]bgi 'U'7]fW]hž'Ui Z'XYb'k]f
i bg'gY\ f'ZfYi Yb"

'U'h1 6I 7<H'89F : 9I 9F 'H5GA 5B=9B 2
U'h1 K 5B89FB'5A 'A CI BH'5A CG'ß'89F'8I B?9@<9# 2 K]f
a UWYb'i bg'ja '8i b_Y'b'Ui Z'XYb'K Y['ni a '6Yf['5a cg
U'h1 : 5B7MF99: 'H<9; 5F89BG'65MC: : ð 9G 2
U'h1 K 9=GG9'?² B= 9'JCB'9J 9F 7F 997<'GH5H9'F 9G9F J 9 2

U`h1 : @ GG, 69FEI 9FI B; `9J 9F 7F 997 < `GH5H9`F 9G9F J 9 2

U`h1 9J 9F 7F 997 < `: 5@@G!65<B 2

"

8YhU]`g

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