

%+ `]b hY fY ggUb hY `: U\_hYb `ØVYf`DUfU[ i Um

8 ]Y `]b hY fY ggUb hY ghY b `: U\_hYb `ØVYf`DUfU[ i Um`YfZ ` \fYb`k ]f  
VY]i bgYfYa `6Ygi W`XYg`@UbXYg`8Yf`Ua Yf]\_Ub]gWXY  
9ggUm]gh`D>C/ Ua d/ , &%+ /F ci f\_Y`k ]hnY`hY`Y]ba U`ž  
DUfU[ i Um`gY]` b]f[ YbXk c`i bX`ZØf`b]W`hg`VYfØ`a h "  
5bgW`]Y» YbX`i bhYfbU`a `Yf`Y]bY` ; YgW`ÀZhgfY]gY`Xcfh`]bž  
j Yf`]YVhY`g]W`]b`XUg`@UbX`i bX`nc[ `dfca dh`Xcfh`]b`" CVk c`\`  
k ]f`b]W`hgU[ Yb`\_ØbbYbž`XUgg`k ]f`X]Y`[ `Y]W`Y`Ui ZZU``YbXY  
5bn]Y`i b[ g\_fUZh`[ YgdØfh`\UVYbž`\UVYb`k ]f`DUfU[ i Umg  
; YgW`]W`hY`i bX`5i h`Ybh]n]h`h`Ui Z`YXYb`: U``[ YgW`Àhnh`8 Ug  
\_`Y]bY`i bX`\_`Àa dZYbXY`@UbX`]gh`Y]b`XUa dZYbXYg  
gi Vhfc d]gW`Yg`@UbX`a ]h`VYa Yf`\_Ybgk YfhYb`?cbhfUghYb`i bX  
Y]bYf`hfU[ ]gW`Yb`i bX`\Y]» Yb` ; YgW`]W`hY`j c``Yf` ; Yk U`h`i bX  
J Yf`i gh`Hfchn`i bgYfYg`fY`Uh]j `i fnYb`5i ZYbh`U`hg`g]bX`k ]f  
Ui ZY]bY`J ]Y`nU`\``]bhYfYggUb hYf`: U\_hYb `ØVYf`/ Ua d`^Y``d/

8 ]Y `]b hY fY ggUb hY ghY b `: U\_hYb `ØVYf`DUfU[ i Um`YfZ ` \fYb`k ]f`VY]  
i bgYfYa `6Ygi W`XYg`@UbXYg

8Yf`Ua Yf]\_Ub]gWXY`9ggUm]gh`D>C F ci f\_Y`k ]hnY`hY`Y]ba U`ž  
DUfU[ i Um`gY]` b]f[ YbXk c`i bX`ZØf`b]W`hg`VYfØ`a h "5bgW`]Y» YbX  
i bhYfbU`a `Yf`Y]bY` ; YgW`ÀZhgfY]gY`Xcfh`]bžj Yf`]YVhY`g]W`]b`XUg  
@UbX`i bX`nc[ `dfca dh`Xcfh`]b`"

CVk c`\`k ]f`b]W`hgU[ Yb`\_ØbbYbž`XUgg`k ]f`X]Y`[ `Y]W`Y`Ui ZZU``YbXY  
5bn]Y`i b[ g\_fUZh`[ YgdØfh`\UVYbž`\UVYb`k ]f`DUfU[ i Umg  
; YgW`]W`hY`i bX`5i h`Ybh]n]h`h`Ui Z`YXYb`: U``[ YgW`Àhnh`8 Ug`\_`Y]bY  
i bX`\_`Àa dZYbXY`@UbX`]gh`Y]b`XUa dZYbXYg`gi Vhfc d]gW`Yg`@UbX`a ]h  
VYa Yf`\_Ybgk YfhYb`?cbhfUghYb`i bX`Y]bYf`hfU[ ]gW`Yb`i bX`\Y]» Yb  
; YgW`]W`hY`j c``Yf` ; Yk U`h`i bX`J Yf`i gh`"

Hfchn`i bgYfYg`fY`Uh]j `i fnYb`5i ZYbh`U`hg`g]bX`k ]f`Ui ZY]bY

J ]Y`nU\` ]bhYfYggUbhYf: U\_hYb`ØVYf`DUfU[ i Um[ Yghc» Ybžj cb  
XYbYb`k ]f`X]Y`VYghYb`]a` : c`[ YbXYb`hY]`Yb"

⇒bhYfYggUbhY` : U\_hYb`ØVYf`DUfU[ i Um

% " A Y\`f`U`g` , \$`i` `XYf`DUfU[ i UmYf`g]bX`A`Ygh]nYb.`A`YbgWXYb  
[ Ya` ]gW`hYf`gdUb]gWXYf`i` bX`]bX]Ub]gWXYf`5VghUa` a`i`b["`  
fE`i`Y`Y.`667Ł

&" DUfU[ i Um]gh`Y]b`nk`Y]gdfUW`][ Yg`@UbX.`;`i`UfUbÉ]gh`gY]bY  
YfghY`GdfUWXY`i`bX`GdUb]gW`gY]bY`nk`Y]hY`"9g`]gh`Ui`W  
Y]bYg`XYf`k`Yb][ Yb`gØXUa`Yf]\_Ub]gWXYb`@AbXYfž`XUg`gY]bY  
A`i`hYfgdfUWXY`U`g`5a`hgdfUWXY`VY]VY\`À`h`fE`i`Y`Y.`7-5  
K`cf`X` : UWVcc\_Ł

'`" ;`i`UfUbÉ]gh`Y]bY`Ui`ha`U`Yf]gWXY`GdfUWXY`"J`]Y`Y`gY]bYf  
K`cfhYž`k`]Y`Ui`W`gY]bY`A`i`g]\_ž`]a` ]h]YfYb`X]Y`bUhØf`]WXYb  
;`Yf`Ai`gWXY`j`cb`H]YfYb`i`bX`XYf`bUhØf`]WXYb`i`a`[ YVi`b["`  
fE`i`Y`Y.`H\`Y` ;`i`UfX]UbŁ

`U`h1` 9]bY`?UfhY`j`cb`DUfU[ i Um]i`bX`gY]bYb`B`UW`VUfb` 2`DUfU[ i Um  
hY]`h`g]W`X]Y`@U`Hf]d`Y` : fcbhYfU

% " 8]Y`YfghY`j`cb`j`]Y`Yb`[ Yc[ fUZ]gW`]bhYfYggUbhYb`HUhgUWXYb  
ØVYf`DUfU[ i Um]ghž`XUgg`Yg`Y]bYg`j`cb`XfY]`@AbXYfb`]ghž`X]Y  
g]W`@U`Hf]d`Y` : fcbhYfU`fB]Y`8fY]ZUWXY` ;`fYbnYŁ`hY]`Ybž  
Y]bY`8fY]`AbXYf[ fYbnY`Ybh`Ub[ `XYf`?fYi`ni`b[ `j`cb  
DUfU[ i Umž`5f[ Ybh]b]Yb`i`bX`6fUg]`]Yb`fE`i`Y`Y.`667Ł

&" 5i`Z[ fi`bX`XYf`nYbh`fU`Yb`@U[ Y`XYg`@UbXYg`]b`GØXUa`Yf]\_U  
k`]fX`Yg`a`UbW`a`U`Ui`W`U`g`7cfUnĭ`b`XY`Gi`XUa`Åf]WU  
fk`Yfn`GØXUa`Yf]\_UgŁ`VYnY]W`bYh`fE`i`Y`Y.`<i`ZZ]b[ hc`b`Dc`ghŁ

'`" 8]Y`9]gYbVU\`b`]b]Y`5gi`bWĭ`b!9bWUfbUWĭ`b`k`Uf`X]Y`YfghY  
9]gYbVU\`b`]b]Y`]b`GØXUa`Yf]\_U`9g`k`i`fXY`j`cb`%` ,` !%` \*`%  
j`cb`Vf]h]gWXYb`⇒b[ Yb]Yi`fYb`[ YVUi`h`fE`i`Y`Y.`@cbY`m  
D`UbYhŁ

`U`h1` ⇒bhYfYggUbhY` : U\_hYb`ØVYf`XYb`DUfU[ i Um!Ni` [ 2

%" ð·DUfU[ i Um]gh`XUg`D]ghc`YbXi Y`bcWk`Y[ U`žgc`Ub[ Y  
VY]XY`DUfhY]Yb`fY[ ]ghf]YfhY`6`i hgdYbXYf`g]bX`"8 Ug`]gh  
bUhØf`]Wk`Y]bY`a`Y]bYf`]bhYfYggUbhYghYb` : U\_hYb`ØVYf  
DUfU[ i Um`fE i Y`Y. `7\]WU[ c`Hf]Vi bYŁ

&" %, %%Yf`Ub[ hY`DUfU[ i Um`X]Y`I bUV\Åb[ ][ \_Y]hj cb  
GdUb]Yb" ð·XYb`YfghYb`\* \$`Ÿ\`fYb`XYf`I bUV\Åb[ ][ \_Y]h  
k i fXY`Yg`YXcWk`j cb`XfY]`8 ]\_hUhc`fYb`fY[ ]Yfh`fE i Y`Y.  
ðZcD`YUgYŁ

' " 8Yf`Xf]hhY`8 ]\_hUhc`f`XYg`@UbXYgž: fUbW]gWc`@đ dYnž`ZØ\`fhY  
%, \*)!%, +\$`?f]Y[ ` [ Y[ Yb`I fi [ i Umž`6fUg]`]Yb`i bX  
5f[ Ybh]b]Yb"K Å\`fYbX`XYg`?cbZ]\_hg`fMY`Ubbh`U`g  
8fY]Vi bX\_f]Y[ Łk i fXY`X]Y`<Å`ZhY`XYf`a`Åbb`]Wk`Yb  
6Yj`Ò`\_Yfi b[ `[ YhØhYh`fE i Y`Y. `9Wc`bca ]ghŁ

U`h1 ðhYfYggUbhY` : U\_hYb`ØVYf`XYb`DU`Ugh]j cb  
DUfU[ i Um`2 DU`UW]c`XY`@đ dYn]b`5gi bW]i b

%" 8 Ug`@UbX`j Yf`c`f`Ui Wk`X]Y`Ÿ i UnÖ!K UggYfZÅ`Y`Ub`6fUg]`]Yb"  
<Yi hY`g]bX`X]Y`K UggYfZÅ`Y`Y]bY`XYf`k ]Wk`h[ ghYb  
Hci f]ghYbUhfhU\_h]cbYb`6fUg]`]Ybg`fi bX`XYf`K`Y`hŁ`fE i Y`Y.  
9Wc`bca ]ghŁ

&" a`&\$`Ÿ\`f\i bXYfh`Yf`YVhY`DUfU[ i Um`k`Y]hYfY`XfY]  
Ÿ\`fnY\`bhY`XYf`8 ]\_hUhi`f`i bhYf`5`ZfYXc`Ghfc`Yggbyfž`XYf  
gWk`]Y»`]Wk`%- , -` [ YghØfnh`k i fXY`"fE i Y`Y. `667Ł

' " DUfU[ i Um]gh`bYVYb`6c`]j ]Yb`Y]bYf`j cb`nk`Y]  
6]bbYbghUUhYb`]b`GØXUa`Yf]\_U`fE i Y`Y. `7`5`K`c`f`X  
: UWV`cc`Ł

(" DUfU[ i Um`a`U[ `nk`Uf`\_Y]bY`?ØghY`\UVYbž`UVYf`DUfU[ i Um  
\Uh`X]Y` [ fØ» hY`A`Uf]bY`U`Yf`6]bbYbghUUhYbž`a`]h  
A`Uf]bYZ]Y[ Yfbž`Y]bYa` : `i`ggj`YfhY]X][ i b[ g`cfdg`i bX`Y]bYf  
?ØghYbk`UWk`Yž`X]Y`U`Y`HY]`gY]bYf`GhfY]h\_f`Å`ZhY`g]bX"  
fE i Y`Y. `A`j]hUfm`<]ghc`fm`B`ck`Ł

) " 8]Y`J`YfhY]`i b[ `XYg`f`Y]Wk`hi`a`g`]gh]b`DUfU[ i Um`XYi`h]Wk  
i b[ `Y]Wk`ž`k`c`VY], \$`i`XYg`@UbXYg]j`cb`&ž) `i`XYf  
6Yj`Ò`\_Yfi b[ `[ Y\`U`hYb`k`YfXYb`i bX`%\*`%`DYfgc`bYb`-`\$`i  
XYg`f`Y]Wk`hi`a`g`XYg`@UbXYg`\_cb`hfc`]YfYb`"fE i Y`Y. `H\Y  
; i`UfX]UbŁ

U`h1 K ]ggYbgk YfhYg'ØVYf'DUFU[ i Um7\UWŁ' '% 2 8Yf  
i bVYk c\bhY'BcfXYb'fb]X.'≡cgi bUž7fYUh]j Y'7ca a cbgŁ

%" 9]b'; fc» hY]'XYg'BcfXk YghYbg'DUFU[ i Umg'k ]fX'j ca '7\UWŁ  
Y]b[ Ybca a YbžY]bYf'f]Yg][ Yb'i bX'k Y]h[ Y\YbX  
i bVYk c\bhYb'9VYbY"DUFU[ i Um'i bX'6c`]j ]Yb' \_Åa dZhYb']b  
XYb'%'-' \$Yf'Ŧ\fyb'XUfi a 'i bX'\]bhYf']Y» Yb'%'\$"\$\$\$'HchY"  
fE i Y`Y.'667Ł

&" 9]bY'XYf'ØVYffUgWYbXYfYb'HUhgUWYb'ØVYf'DUFU[ i Um]ghž  
XUgg'Yg'- - ž- 'i 'gY]bYg'Ghfca g'Ui g'K UggYf\_fUZhk Yf\_Yb  
VYn]Y\hž'k cVY]'+) i 'XUj cb'Ui g'XYa '≠U]di !GhUi XUa a  
ghUa a Yb" fE i Y`Y.'7-5'K cf'X': UWVcc\_Ł

' " 8Yf'≠U]di !GhUi XUa a 'jgh'Y]b'V]bUh]cbU'Yf'GhUi XUa a ž'XYf  
j cb'6fUg]'Yb'i bX'DUFU[ i Um'Ua 'i 'i gg'DUFUb'½VYhf]YVYb  
k ]fXž'i bX'XUg'nk Y]h[ f0» hY'K UggYf\_fUZhk Yf\_'XYf'K Y'h"  
%-, ( 'YfVUi hž'k Uf'Yf'XYf' [ f0» hY'V]g'ni f'9f0ZZbi b[ 'XYg  
8fY]!GW' i W'hYb!GhUi XUa a g]b'7\]bU'a 'Ŧ\f'&\$\$, "  
fE i Y`Y.'K ]\_]dYX]UŁ

U`h1 GhUi XUa a 'j cb'DUFU[ i Um 2

@cbY`m'D`UbYh'Gci h\ '5a Yf]WU'Ybh\Å'h'Y]bYb'i a ZUggYbXYb  
F Y]gYZ0\fyf'Z0f'XUg'@UbXž'Y]bgW'`Y» `]W'j ]Y'Yf'k Y]hYfYf  
]bhYfYggUbhYf': U\_hYb'ØVYf'DUFU[ i Um' ]XYU'Z0f'X]Y'Yb][ Ybž'X]Y  
gck c\`X]Y'k ]W'h][ ghYb'GY\Yb'gk 0fX][ \_Y]hYb'Yf'\_i bXYb'U'g'Ui W  
k Yb][ Yf'VYZU\fybY'GhfU» Yb'k Å\`Yb'a 0W'hYb"

@Y]hV]'X.'8fYUa gh]a Y

8YhU]`g

6Ygi WYb'G]Y'i bg'Ui Z.'Y]bY!fY]gY"XY