

; i hY': fU[ Yb 'Ub 'A ÅXWYb. 'H]d dg'ZØf 'Y]b  
]bhYfYggUb hYg'; YgdfÅW

9bhXYW\_Y'X]Y'dgmWc`c[ ]gWYb'5gdY\_hY'j cb'[ i hYb': fU[ Yb']b  
; YgdfÅWYb'a ]h'A ÅXWYb' '@YfbY'X]Y'j YfgW]YXYbYb': fU[ Y!  
HmdYb'i bX']\fY'K ]f\_i b[ '\_YbbYbž'gck ]Y'Ya dZc\`YbY  
; YgdfÅWgh\Ya Yb'i bX'!ghfUHY[ ]Yb'ZØf'YfZc`[ fY]WY  
I bhYf\U`hi b[ Yb" ; YgdfÅWYA ]h'A ÅXWYb' , DgmWc`c[ ]Y



⊕`XYf'ca a i b]\_Uh]cb`a ]h'A ÅXWYb`gd]Y`Yb`X]Y`[ YghY`hYb  
: fU[ Yb`Y]bY`YbhgWY]XYbXY`Fc`Y"DgmWc`c[ ]gWY`Ghi`X]Yb`UVYb  
[ YnY][ hž`XUgg`X]Y`E i U`hÅh`i bX`5fh`XYf': fU[ Yb`Y]bYb`ghUf`\_Yb  
9]bZi`gg`Ui`ZXYb`J`Yf`Ui`Zi`bX`X]Y`H]YZY`Y]bYg'; YgdfÅWg`UVYb  
\_ÖbbYb"⊕`X]YgYa`5fh]\_Y`k YfXYb`k ]f`i bg`XU`Yf`a ]h`XYb  
dgmWc`c[ ]gWYb`5gdY`\_hYb`j`cb`[ i hYb': fU[ Yb`]b`Y]bYa` ; YgdfÅW  
a ]h'A ÅXWYb`VYZUggYb"K ]f`k YfXYb`gdYn]Z]gWY': fU[ Y!HmdYb  
i bhYfgi`WYb`i bX`]fY`K ]f`\_i b[ `Ui`Z`XUg'; YgdfÅW`UbU`mg]YfYb"

Ni XYa`k YfXYb`k ]f`9a dZY`i b[ Yb`Z0f` ; Ygdf`ÅW gh`Ya Yb`i bX  
; Ygdf`ÅW gghfUhY [ ]Yb`Z0f`Y]b`[ Y`i b[ YbYg` ; Ygdf`ÅW `a ]h`A`ÅXW Yb  
j c fghY`Yb`"9g ]gh`Yb hgW Y ]XYbXž`X]YgY`5gdY`\_hY`ni`j YfghY`Ybž`i a  
Y]bY`YZY`\_h]j Y`i bX`VYfY]W YfbXY`?ca`a`i`b]\_Uh]cb`a` ]h`A`ÅXW Yb`ni  
Yfa`Ò[ `]W Yb`"

DgmW`c`c [ ]gW`Y`5gdY`\_hY`j`c`b`[`i`hYb` :`fU[`Yb  
]b`Y]bYa` ;`Ygdf`ÅW`a` ]h`A`ÅXW`Yb`

⇒a`i`a`[`Ub[`a` ]h`A`ÅXW`Yb`]gh`Yg`k` ]W`h][`ž`X]Y`dgmW`c`c [ ]gW`Yb  
5gdY`\_hY`j`c`b`[`i`hYb` :`fU[`Yb`ni`j`YfghY`Ybž`i`a`Y]b`YfZc`[`fY]W`Yg  
;`Ygdf`ÅW`ni`Z0`fYb`" ;`i`hY` :`fU[`Yb`\_`0bbYb`XUg``hYfYggY`k`YW`Ybž  
J`YfhfUi`Yb`Ui`Z`Ui`Yb`i`bX`X]Y`?ca`a`i`b]\_Uh]cb`j`Yfh]Y`ZYb`" < ]Yf`g]b`X  
Y]b][`Y`k` ]W`h][`Y`dgmW`c`c [ ]gW`Y`5gdY`\_hY`ž`X]Y`VY]`XYf`K`U`"j`c`b  
 :`fU[`Yb`VYf0W`\_g]W`h][`h`k`YfXYb`gc`hYb`.

- C`ZYb`Y]h`GhY`Yb`G]Y`c`ZYbY` :`fU[`Ybž`X]Y`a`Y`f`U`g`Y]bY``U  
c`XYf`BY]b!5`bhk`c`fh`YfZc`fXYfb`"8`UXi`fW`Yfa`i`h][`Yb`G]Y`XUg  
A`ÅXW`Ybž`]`fY` ;`YXUb`\_Yb`i`bX` ;`YZ0`Y`Y`Ui`gni`Xf0W`\_Yb`i`bX  
nY][`Yb``hYfYggY`Ub`]`fYf`A`Y]bi`b [`"
- 9a`dUh`Y.]`NY][`Yb`G]Y`9a`dUh`Yž`]bXYa`G]Y`Y]bZ0`gUa`Y  
 :`fU[`Yb`ghY`Ybž`X]Y`Ui`Z`X]Y` ;`YZ0`Y`X`Yg`A`ÅXW`Ybg  
Y]b[`Y`Yb`"8`]Yg`gW`UZh`Y]bY`J`YfV]bXi`b [`i`bX`nY][`hž`XUgg  
G]Y`g]W`Z0f`]`f`K`c`VY`Z]bXYb`]b`hYfYgg]YfYb`"
- 5i`h`Yb]h]n]h`h`G]Y]Yb`G]Y`Ui`h`Yb]h]gW`i`bX`ghY`Yb`G]Y  
Y`f`]W`Y` :`fU[`Ybž`X]Y`j`c`b`d`Yfg0b`]W`Ya``hYfYggY`g]bX`"  
A`ÅXW`Yb`Yf`\_YbbYbž`k`Ybb` :`fU[`Yb`[`YghY`h`k`YfXYbž`i`a`ni  
VYY]bXfi`W`\_Yb`c`XYf`ni`a`Ub]di`]YfYbž`i`bX`gW`ÅhnYb  
ghUhhXYggYb`Y`W`hYg``hYfYggY`"
- Dcg]h]j`Y`J`Yfgh`Åf`\_i`b [`.]`Yfk`YbXYb`G]Y`d`cg]h]j`Y`  
J`Yfgh`Åf`\_i`b [`ž`]bXYa`G]Y` :`fU[`Yb`ghY`Ybž`X]Y`XUg`A`ÅXW`Yb  
Yfa`i`h][`Ybž`0VYf`]`fY`Gh`Åf`\_Ybž`Hf`Åi`a`Y`i`bX`N]Y`Y`ni  
gd`fYW`Yb`"8`]Yg`\_`Ubb`XUg`GY`V`ghk`Yfh[`YZ0`Y`ghY][`Yfb`i`bX  
XUg` ;`Ygdf`ÅW`d`cg]h]j`[`YghU`hYb`"
- <i`a`cf.`<i`a`cfj`c`Y` :`fU[`Yb`\_`0bbYb`XUg`9]g`V`fYW`Ybž  
GdUbbi`b [`Yb`UVVUi`Yb`i`bX`Z0f`Y]bY`Yb`hgdUbb`hY`

5ha cgd\ÅfY'gcf[ Yb""5WkhYb'G]Y'YXcW\XUfUi Z'XYb  
f]W\h][ Yb'NY]hdi b\_h'i bX'X]Y'dUggYbXY'5fhj cb'<i a cf'ni  
k Å\`Ybž'i a 'A ]ggj YfghÅbXb]ggY'ni 'j Yfa Y]XYb"

- FYgdY\_h'NY][ Yb'G]Y'FYgdY\_hž]bXYa 'G]Y'fYgdY\_hj c`Y'i bX  
fYgdY\_hj c`Y': fU[ Yb'ghY`Ybž'X]Y'X]Y'K YfhY'i bX  
A Y]bi b[ Yb'XYg'A ÅXWYbg'fYgdY\_h]YfYb""8]Yg'\_Ubb'XUg  
J YfhfUi Yb'ghÅf\_Yb'i bX'Y]bY'fYgdY\_hj c`Y'?ca a i b]\_Uh]cb  
ZØfXYfb"

8i fW'XUg'J YfghÅbXb]g'X]YgYf'dgmW\c`c[ ]gWYb'5gdY\_hY'\_ÖbbYb  
G]Y' [ Yn]Y'hY'i bX'k ]f\_i b[ gj c`Y': fU[ Yb'ghY`Ybž'i a 'Y]b'h]YZfYg  
J YfghÅbXb]g'ni 'Ybhk ]W\_Y'bž'Y]bY'J YfV]bXi b[ 'Ui Zni VUi Yb'i bX'Y]b  
YfZc`[ fY]WYg; YgdfÅW'a ]h'A ÅXWYb'ni 'ZØ\fYb"

GdYn]Z]gWY': fU[ Y!HmdYb'i bX']\fY'K ]f\_i b[  
Ui Z'XUg'; YgdfÅW

6Y]a ': Ø\fYb'Y]bYg'; YgdfÅW'g'a ]h'Y]bYa 'A ÅXWYb' ]gh'Yg'k ]W\h][ ž  
X]Y'f]W\h][ Yb': fU[ Yb'ni 'ghY`Ybž'i a 'XUg'; YgdfÅW' ]bhYfYggUbh  
i bX'i bhYf\U'hgUa 'ni '[ YghU'hYb"GdYn]Z]gWY': fU[ Y!HmdYb'\_ÖbbYb  
XUVY']\Y'ZYbž'XUg'; YgdfÅW' ]b'X]Y' [ Yk ØbgW\hY'F ]W\hi b[ 'ni  
'Yb\_Yb'i bX'Y]bY'h]YZfY'J YfV]bXi b[ '\Yfni ghY`Yb"

%" CZZbY': fU[ Yb.'CZZbY': fU[ Yb'g]bX'Y]bY' [ i hY'A Ö[ `]W\\_]hž  
i a 'XUg'; YgdfÅW'Ua '@Ui ZYb'ni '\U'hYb'i bX'XYa  
A ÅXWYb'X]Y'A Ö[ `]W\\_]h'ni '[ YVYbž'Ui gZØ\f`]W\`ni  
Ubhk cfhYb"G]Y'YfZcfXYfb'a Y\f'U`g'bi f'Y]bY'Y]bZUWY'!<br>cXYf'BY]b!5bhk cfh'i bX'\_ÖbbYb'XUni 'VY]hfU[ Ybž'XUgg'XUg  
A ÅXWYb'g]W'ÖZbYh'i bX'a Y\f'j cb'g]W'YfnÅ'h"

&" ; YgW`cggYbY': fU[ Yb.'; YgW`cggYbY': fU[ Yb'\]b[ Y[ Yb  
YfZcfXYfb']b'XYf'FY[ Y`bi f'Y]bY'\_i fnY'5bhk cfh'i bX'Y][ bYb  
g]W' [ i hž'i a 'gdYn]Z]gWY'`bZcfa Uh]cbYb'ni 'Yf\U'hYb"G]Y  
\_ÖbbYb'j Yfk YbXYh'k YfXYbž'i a 'XUg'; YgdfÅW'ni 'Yb\_Yb  
cXYf'i a 'VYgh]a a hY'8YhU]`g'ni ' \_ÅfYb"

' " K ØfXYgh'Xi ''YVYf': fU[ Yb.'8]YgY'5fhj cb': fU[ Yb'V]YhYh  
XYa 'A ÅXWYb'X]Y'A Ö[ `]W\\_]hž'nk ]gWYb'nk Y]'C dh]cbYb  
ni 'k Å\`Yb'i bX']\fY'J cf`]YVYb'cXYf'A Y]bi b[ Yb  
dfY]gni [ YVYb"G]Y'g]bX'Y]bY'i bhYf\U'hgUa Y'A Ö[ `]W\\_]hž  
i a 'XUg'; YgdfÅW'Ui ZcW\_Yfb'i bX']bhYfYggUbhY'9]bV`]W\_Y  
]b'X]Y'DYfgÖb`]W\\_]h'XYg'A ÅXWYbg'ni 'Yf\U'hYb"

(" DYfgÖb`]WXY : fU[ Yb. `DYfgÖb`]WXY : fU[ Yb`\_ÖbbYb`XUni  
VY]hfU[ Ybž`Y]bY`h]YZYfY`JYfV]bXi b[ `Yfni ghY`Yb`i bX`XUg  
JYfhfUi Yb`XYg`A`ÄXWXYbg`ni` [Yk`]bbYb`"G]Y`Yfa`Ö[ `]WXYb  
Ygž`g]WXY`ØVYf`dYfgÖb`]WXY` ðhYfYggYbž`9fZU`fi b[ Yb`i bX  
; YZØ`Y`Ui`gni`hUi`gWXYb`i bX`gc`Y]bY`]bh]a`YfY`9VYbY`]a  
; YgdfÄWXY`ni`YffY]WXYb`"

)" <mdch\Yh]gWXY : fU[ Yb. `<mdch\Yh]gWXY : fU[ Yb`V]YhYb`X]Y  
A`Ö[ `]WXY`\_Y]hž`ØVYf`h\Yc`fYh]gWXY`GnYbUf]Yb`cXYf  
; YXUb`\_YbYI`dYf]a`YbhY`ni`X]g`\_i`h]YfYb`"G]Y`fY[ Yb`X]Y  
: UbhUg]Y`Ub`i bX`\_ÖbbYb`ni`]bhYfYggUbhYb`i bX`YV\UZhYb  
; YgdfÄWXYb`ZØ`fYb`"

ðg[ YgUa`h`]gh`Yg`k`]WXYh[ ž`Y]bY`Ui`g[ Yk`c[ YbY`A`]gWXY`b[  
j`YfgWXY`YXYbYf` : fU[ Y!HmdYb`ni`j`Yfk`YbXYbž`i`a`XUg` ; YgdfÄWXY  
UVk`YWXY`g`i`b[ gfY]WXY`i`bX`gdUbYbYbX`ni` [YghU`hYb`"8`i`fWXY  
[ YgWXY]W`hYg`9]bgYhnYb`j`cb`gdYn]Z]gWXYb` : fU[ Y!HmdYb`\_Ubb`a`Ub  
XUg` ; YgdfÄWXY`Yb`\_Ybž`XUg` ðhYfYggY`XYg`A`ÄXWXYbg`k`YW`Yb`i`bX  
Y]bY`Ui`h\Ybh]gWXY`i`bX`VYfY]WXYfYbXY`?ca`a`i`b]\_Uh]cbgYVYbY  
gWXY`UZZYb`"

9a`dZc`\`YbY` ; YgdfÄWXY`gh`Y`a`Yb`i`bX  
; YgdfÄWXY`gghfUhY[ ]Yb`ZØf`Y]b` [ Y`i`b[ YbYg  
; YgdfÄWXY`a`]h`A`ÄXWXYb`

ð`Y]bYa` ; YgdfÄWXY`a`]h`A`ÄXWXYb`]gh`Yg`k`]WXYh[ ž`]bhYfYggUbhY`i`bX  
Ub[ Ya`YggYbY`H\Ya`Yb`ni`k`Ä`Ybž`i`a`X]Y`?ca`a`i`b]\_Uh]cb`ni  
ZØfXYfb`i`bX`Y]bY`dcg]hj`Y`5`ha`cgd`\ÄfY`ni`gWXY`UZZYb`"<]Yf`g]bX  
Y]b[ Y`Ya`dZc`\`YbY` ; YgdfÄWXY`gh`Y`a`Yb`i`bX` ; YgdfÄWXY`gghfUhY[ ]Ybž  
X]Y`XUVY`\Y`ZYb`\_ÖbbYbž`Y]b` [ Y`i`b[ YbYg` ; YgdfÄWXY`a`]h`A`ÄXWXYb  
ni`ZØ`fYb`.

%` ; Ya`Y]bgUa`Y`ðhYfYggYb. : ]bXYb`G]Y`YfUi`gž`k`Y`WXY  
<cVVmg`i`bX`ðhYfYggYb`G]Y`a`]h`XYa`A`ÄXWXYb`hY]Yb`"8`Ug  
\_Ubb`U`g`5`i`g[ Ub[ gdi`b`\_h`ZØf`XUg` ; YgdfÄWXY`X]YbYb`i`bX  
X]Y`6`Ug]g`ZØf`Y]bY`h]YZYf[ Y\YbXY`i`bhYf`U`hi`b[ `V]`XYb`"

&"`5`\_hi`Y`Y`9fY][`b]ggY. `GdfYWXYb`G]Y`ØVYf`U`\_hi`Y`Y`  
BUWXY]WXYhYb`i`bX`H\Ya`Ybž`X]Y`]b`XYb`A`YX]Yb`dfÄgYbh  
g]bX`"8`]Yg`nY][`hž`XUgg`G]Y`g]WXY`ZØf`X]Y`K`Y`hi`a`G]Y`Yfi`a  
]bhYfYgg]YfYb`i`bX`\_Ubb`ni`]bhYfYggUbhYb`8`]g`\_i`gg]cbYb  
ZØ`fYb`"

" DYfgÖb`jWXY`NjY`Y`i bX`HfÄi a Y. : fU[ Yb`GjY`XUg  
A ÄXWXYb`bUWX`j\fyb`Ub[ Zf]gh][ Yb`NjY`Yb`i bX`HfÄi a Yb`  
NY][ Yb`GjY` ðhYfYggY`Ub`j\fyf`Ni \_i bZhi bX`Yfa i h][ Yb`GjY`  
g]Yž`ØVYf`j\fy`5a V]h]cbYb`ni`gdFYWXYb`"

(" FY]gYb`i bX`5VYbhYi Yf. HUi gWXYb`GjY`9fZU\fi b[ Yb  
ØVYf`FY]gYb`i bX`5VYbhYi Yf`Ui g": fU[ Yb`GjY`XUg`A ÄXWXYb  
bUWX`j\fyb`@YV`]b[ gfY]gYn]Y`Yb`cXYf`5VYbhYi Yfbž`X]Y`g]Y`  
Yf`YVh`\Uh"

) " 6ØWXYfž: ]`a Y`i bX`A i g]\_ .`8]g\_i h]Yfyb`GjY`ØVYf`  
[ Ya Y]bgUa Y`Jcf]YVYb`ZØf`6ØWXYfž: ]`a Y`i bX`A i g]\_ "  
HY]Yb`GjY` ðfY`@YV`]b[ gk Yf`\_Y`i bX`UggYb`GjY`XUg`  
A ÄXWXYb`Ui WX`ØVYf`j\fy` : Uj cf]hYb`gdFYWXYb`"

\* " 9a ch]cbU`Y` ðhY``][ Ybn. NY][ Yb`GjY`  
9]bZØ\`i b[ gj Yfa Ö[ Yb`i bX`Ya ch]cbU`Y` ðhY``][ Ybn`]a  
; YgdFÄW`" < ÖfYb`GjY`Ui Za Yf`gUa`ni ž`nY][ Yb`GjY`  
J YfghÄbXb]g`i bX`XfØW`Yb`GjY`9a dUh\]Y`Ui g`"

I a`Y]b`[ Y`i b[ YbYg; YgdFÄW`a`]h`Y]bYa`A ÄXWXYb`ni`ZØ\fybž`]gh  
Yg`k`]W]h][ ž`b]W]h`bi`f`ØVYf`C VYfZÄW`]W]Yg`ni`gdFYWXYbž`gcbXYfb  
Ui WX`h]YZyf[ Y\YbXY`H\Ya Yb`Ubni`gdFYWXYb`"8i fWX`Y]bZØ`gUa Y`  
; YgdFÄW`gghfUHy [ ]Yb`i bX`fygdY`\_hj`c``Yg`Ni` \ÖfYb`\_ÖbbYb`GjY`Y]bY  
j YfhfUi Ybgj`c``Y`J YfV]bXi b[ `Ui ZVUi Yb`i bX`Y]b`]bhYfYggUbhYg  
; YgdFÄW`ZØ\fyb`"

## GWX`i ggZc`[ Yfi b[ .

ð`X]YgYa`5fh`\_Y``\UVYb`k`]f`X]Y`dgmWX`c`c [ ]gWXYb`5gdY`\_hY`j`cb  
[ i hYb` : fU[ Yb`]b`Y]bYa` ; YgdFÄW`a`]h`A ÄXWXYb`UbU`mg]Yfhž  
gdYn]Z]gWXY` : fU[ Y!HmdYb`i bX`j\fy`K`]f`\_i b[ `Ui ZXUg; YgdFÄW`  
i bhYfgi WX`hi bX`Ya`dZc`\YbY` ; YgdFÄW`gh\Ya Yb`i bX`!ghfUHy [ ]Yb  
ZØf`Y]b`[ Y`i b[ YbYg; YgdFÄW`a`]h`A ÄXWXYb`j`cf[ YghY``h`"8i fWX`X]Y`  
5bk YbXi b[ `X]YgYf`H]ddg`i bX`HYWX`b]\_Yb`\_ÖbbYb`GjY` ðfY`  
; YgdFÄW`Y`a`]h`A ÄXWXYb`]bhYfYggUbhYf`i bX`VYXYi hi b[ gj`c``Yf`  
[ YghU`hYb`"8Yb`\_Yb`GjY`XUfUbž`XUgg`X]Y`E`i`U`]h`Äh`XYf` : fU[ Yb`i bX`  
X]Y`5fh`i bX`K`Y]gYž`k`]Y`G]Y`ni` \ÖfYbž`YbhgWXY]XYbX`g]bXž`i a`Y]bY`  
YWX`hY`J YfV]bXi b[ `Yfni`ghY``Yb`"J]Y`9fZc`[ `VY]` ðfYb`ni`\_ÖbZ]h][ Yb  
; YgdFÄW`Yb`°

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