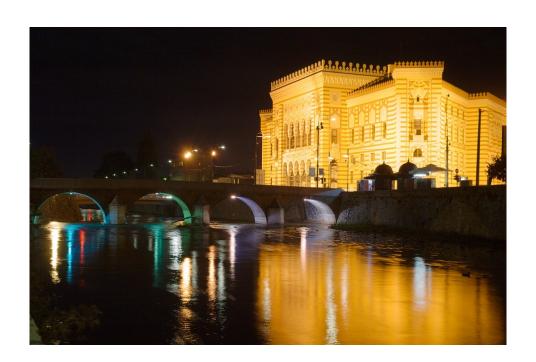


6cgb]Yb i bX < YfnY[ck]bU. 9]b; Y\Y]a b]g j c``Yf BUhi fž?i `hi f i bX; Ybi gg

9bhXYW_Yb^G]Y^X]Y^UhYa VYfUi VYbXYb^@UbXgWXUZhYb^6cgb]Yb i bX^< YfnY[ck]bUgž^\]ghcf]gWXY^GWXÀhnY^]b^GUfU^Yj cž _i `]bUf]gWXY^<][\`][\hg^i bX^gdUbbYbXY^Ci hXccf! 5_h]j]hÀhYb^



K]``_ca a Yb']b'6cgb]Yb'i bX'<YfnY[ck]bUž'Y]bYa 'j YfghYW_hYb i k Y``]a '<YfnYb'XYg'6U`_Ubgž'XUg'XUfUi Z'k UfhYhž'j cb UVYbhYi Yf`i gh][Yb'FY]gYbXYb'YbhXYW_h'ni 'k YfXYb"'A]h'gY]bYb a U`Yf]gWXYb'@UbXgWXUZhYbž'ZUgn]b]YfYbXYb'GhÀXhYb'i bX'Y]bYf fY]WXYb'_i `hi fY``Yb'; YgWX]WXhY'V]YhYh'X]YgYg'@UbX'Y]bY': Ø``Y'j cb 9f`YVb]ggYbž'X]Y'gY`Vgh'X]Y'Ubgdfi WXgj c``ghYb'9bhXYW_Yf VY[Y]ghYfb'k YfXYb"'Jcb'XYb'a U'YghÀh]gWXYb'; YV]f[Yb'i bX i bVYfØ\fhYb'BUhi fdUf_g'V]g'\]b'ni 'XYb'di `g]YfYbXYb'GhfU»Yb'j cb GUfU'Yk c'[]Vh'Yg'j]Y``ni 'Yf_i bXYb'i bX'ni '[Yb]Y»Yb"'\db'X]YgYa 5fh]_Y``bY\a Yb'k]f'X]WX'a]h'Ui Z'Y]bY'FY]gY'Xi fWX'X]Y UhYa VYfUi VYbXYb'@UbXgWXUZhYbž'X]Y'\]ghcf]gWXYb'GWXÀhnY'i bX

X]Y'_i`]bUf]gW\Yb'?Ògh`]W_Y]hYb'6cgb]Yb'i bX'<YfnY[ck]bUg"'@Ugg i bg'[Ya Y]bgUa']b'X]Y'; Y\Y]a b]ggY'X]YgYg'j]Y`gY]h][Yb'@UbXYg Y]bhUi W\Yb'i bX'\YfUi qZ|bXYbž'k Ug'Yg'ni 'V]YhYb'\Uh'

9bhXYW_i b['XYf'UhYa VYfUi VYbXYb @UbXgWX UZhYb '6cgb]Yb 'i bX '< YfnY[ck]bUg

6cgb]Yb'i bX'<YfnY[ck]bU']gh'Y]b'k U\fYg'DUfUX]Yg'ZØf
BUhi f`]YV\UVYf'i bX'FY]gYbXYŽ'X]Y'Ui Z'XYf'Gi W\Y'bUW\
i bj Yf[Ygg`]W\Yb'@UbXgW\UZhYb'g]bX"'8 Ug'@UbXŽ'XUg'j cb
; YV]f[YbŽ'K À`XYfbŽ': `ØggYb'i bX'\]ghcf]gW\Yb'Gh\XhYb'[Ydf\A[h]gh\Z'V]YhYh'Y]bY'J]Y`ZU`h'Ub'BUhi fk i bXYfbŽ'X]Y'YXYb'6Ygi W\Yf']b
]\fYb'6Ubb'n]Y\Yb'k YfXYb"'Jcb'XYb'a U'Ygh\Ah]gW\Yb'8]bUf]gW\Yb
5`dYb'V]g'\]b'ni 'XYb'_`UfYbZ'hØf_]gZUfVYbYb'K UggYfb'XYf': `ØggY'
X]Y'BUhi f`UbXgW\UZhYb'g]bX'UhYa VYfUi VYbX"

8]Y'8]bUf]gWXYb'5`dYb'YfghfYW_Yb'g]WX'XifWX'Y]bYb'; fc>hY]`
XYg'@UbXYg'i bX'V]YhYb'Y]b][Y'XYf'gWX\ObghYb'DUbcfUa Yb"
6YgcbXYfg'XYf'Jf]é!DUgg']gh'Y]b'VY`]YVhYg'N]Y`'ZØf'K UbXYfYf
i bX': chc[fUZYb"'<]Yf'_Ubb'a Ub'X]Y'\cWX'Ui ZfU[YbXYb';]dZY`i bX
X]Y'i bVYfØ\fhY'BUhi f'VYk i bXYfb"

B]WW.hrk Y]hrj cb XYb 5 dYb YbhZYfbhr]Y[hrXYf'I bU'BUh]cbU`dUf_ž VYfØ\a hrZØfrgY]bY VYY]bXfi W_YbXYb K UggYfZÀ``Y i bX XYb _`UfYb : `i gg I bU" K UbXYfk Y[Y Xi fW n]Y\Yb X]Y gWW.fc ZZYb @UbXgWW.UZhYb i bX V]YhYb Ni [Ub['ni 'j YfghY W_hYb 'D`ÀhnYbž'k c 'a Ub 'X]Y i bVYfØ\fhY 'B Uhi f']b 'j c``Yf'DfUWW.hrYf'YVYb '_Ubb" '8 Yf'GhfV UW_] 6i _ž'Y]b 'a U`Yf]gWW.Yf'K UggYfZU```]a '< YfnYb 'XYg'DUf_gž']gh'Y]b < Ò\Ydi b hrZØfr'YXYb 'B Uhi fZfYi bX"

9]b'k Y]hYfYg'¾k Y`']gh'XYf'Gi h'Yg_U'BUh]cbU`dUf_ž'XYf'À`hYghY
BUh]cbU`dUf_']b'6cgb]Yb'i bX'<YfnY[ck]bU'''<]Yf'VYZ]bXYh'g]W\'XYf
\OW\ghY';]dZY`'XYg'@UbXYgž'A U[`]āž'XYf'b]W\h'bi f'ZØf'gY]bY
UhYa VYfUi VYbXY'GW\Ob\Y]hž'gcbXYfb'Ui W\'ZØf'gY]bY
<YfUi gZcfXYfi b[Yb'VY_Ubbh']gh'''8]Y'K UbXYfi b[Yb']b'X]YgYa
; YV]Yh'g]bX'ZØf'YfZU\fYbY'K UbXYfYf']XYU`ž'k À\fYbX'X]Y'5i gg]W\h
Ui Z'X]Y'i a `]Y[YbXYb'HÀ`Yf'UhYa VYfUi VYbX']gh''

BYVYb`XYb`6Yf[Yb`i bX`K À`XYfb`V]YhYh'6cgb]Yb`i bX`< YfnY[ck]bUUi W\VYY]bXfi W_YbXY: `ØggYžX]Y`dYfZY_hY`CfhY`ZØf`5_h]j]hÀhYbk]Y`FUZh]b[ž:5b[Y`b`cXYf`Y]bZUW\nia `9bhgdUbbYb`g]bX"`8Yf`: `i ggBYfYhj Už`XYf`Xi fW\X]Y`GhUXh`A cghUf`Z]Y»hž`]gh`VYfØ\a h`ZØf`gY]bYgaUfU[X[fØbY::UfVY`i bX`X]Y`a U`Yf]gW\Y`I a [YVi b["`9]b`6Ygi W\XYf`GhUf]`A cghž`XYf`U`hYb`6fØW_Yž`]gh`b]W\h'bi f`_i `hi fY``VYXYi hYbXž`gcbXYfb`Ui W\Y]b`dYfZY_hYf`Cfhž`i a `X]Y`@UbXgW\UZhni [Yb]YggYb"

K Ybb'G]Y'X]Y'?ØghYbfY[]cb'j cb'<YfnY[ck]bU'VYgi W.YbžYbhXYW_Yb'G]Y'X]Y'gdY_hU_i `ÀfY'?fUj]WU'K UggYfZÀ``Y''8]YgYbUhØf`]W.Yb'K UggYfZÀ``Y'g]bX'Y]b'VY`]YVhYf'Ni Zi W.hgcfh'Ubk Ufa Yb'HU[Ybž'kc'?`]ddYbgdf]b[Yb'i bX'GW.k]aaYb'Y]bYYfZf]gW.YbXY'5VkYW.g`i b['V]YhYb''Ia[YVYb'j cb'Ødd][YbK A`XYfb'i bX'KY]bVYf[Ybž']gh'XUg'?fUj]WU!; YV]Yh']XYU`'ZØf'Y]bD]W_b]W_'cXYf'Y]bY'YbhgdUbbhY'NY]h'i bhYf'XYa''GW.UhhYb'XYf6AiaY''

8]Y @UbXgW\ UZhYb '6cgb]Yb 'i bX' < YfnY[ck]bUg'g]bX'b]W\ h'bi f UhYa VYfUi VYbXž'gcbXYfb 'Ui W\ 'Y]b 'NYi [b]g'XYf'_i `hi fY``Yb 'i bX \]ghcf]gW\ Yb 'J]Y`ZU`h'XYg'@UbXYg'' \Rightarrow 'XYb'j YfgW\]YXYbYb 'F Y[]cbYb Z]bXYh'a Ub'b]W\ h'bi f'i bhYfgW\]YX`]W\ Y B Uhi fgW\ Ob\Y]hYbž gcbXYfb 'Ui W\ 'i bhYfgW\]YX`]W\ Y 'HfUX]h]cbYbž'X]Y 'X]Y 'Y]bn][Ufh][Y \Rightarrow Ybh]h\h'xYg'@UbXYg'df\h'[Yb'' <]Yf'g]bX'Y]b][Y'VYY]bXfi W_YbXY B Uhi fgW\ Ui d`\h'nYž'X]Y'G]Y'b]W\ h'j YfdUggYb'gc``hYb.

Cfh	6YqcbXYf\Y]hYb

8]bUf]gW\Y`5`dYb	<pre>< c W [Y V]f[gk Ub X Y fi b[Y b ž</pre>	
	UhYa VYfUi VYbXY DUbcfUa Yb	
I bU'BUh]cbU`dUf_	K UggYfZÀ``Yž'K UbXYfk Y[Yž	
	ibVYfØ\fhY [.] BUhif	
Gi hYg_U'BUh]cbU`dUf_	AU[`]ā!;]dZY`ž'hfUi a\UZhY	
	@UbXgWX UZhYb	
BYfYhj U': `i gg	FUZn]b[žGWk]a a YbžU`hY	
	6fØW_Y'GhUf]'Acgh	
?fUj]WUK UggYfZÀ``Y	GWXk]a a Ybž?`]ddYbgdf]b[Ybž	
	a U`Yf]gWXY'l a [YVi b[

 $8]Y ?? ca V]bUh]cb ``Ui g `Y]b Xfi W_gj c ``Yf `B Uhi f `i b X `_i `hi f Y ``Yf J]Y `ZU`h `a UW. h `6 cgb]Yb `i b X `< Yfn Y [ck]b U `ni `Y]b Ya i bj Yf [`Y]W. `]W. Yb `F Y]g Yn]Y ``]b `9i f cd U "`9 [U`ž `c V `G]Y `Ui Z `XYb 6 Yf [[]d ZY `b `k Ub XYfb `c XYf `Ua `I ZYf `Y]b Yg `[`]hn Yfb XYb `: `i gg Yg Ybhgd Ubb Yb `a `OW. h Yb `` `X]Y `@Ub Xg W. UZh Yb `\]Yf `k Yf XYb `\=\ b Yb g]W. Yf `XYb `5 h Ya `f Ui V Yb `i b X `i bj Yf [Ygg`]W. Y `9f]b b Yfi b [Yb g W. UZZYb "`J Yf [Ygg Yb `G]Y `b]W. h Ž `=\ f Y `? Ua Yf U `a]hni Vf]b [Yb Ž `XYb b YXY `9 W_Y `X]Yg Yg `@Ub XYg `V]Yh Yh Y]b Y `d Yf Z Y_h Y `? i `]gg Y `ZØf `=\ f b A W. gh Yg : chc `$

<]ghcf]gWXY'GWXÀhnY'i bX'_i `hi fY``Yg'9fVY']b GUfU^Yk c</pre>

 $GUfUYk\ c\check{z}'X]Y'<Ui\ dhghUXh'j\ cb'6cgb]Yb'i\ bX'<YfnY[\ ck\]bU\check{z}']gh'Y]b ZUgn]b]YfYbXYf'Cfh\check{z}'k\ c';\ YgWk]WkhY\check{z}'?i\ `hi\ f'i\ bX'A i\ `h]_i\ `hi\ fU`]hÀh Ui\ ZY]bUbXYfhfYZZYb''',\ VYf'*JU\f\i\ bXYfhY'k\ Uf'X]Y'GhUXh'Y]b GWka\ Y`nh]Y[\ Y`'XYf'?i\ `hi\ fYb\check{z}'XYf'VYXYi\ hYbXY'9]bZ\@ggY'Ui\ g'XYa Cga\ Ub]gWk\ Yb'FY]Wk\ \check{z}'XYa\ '<UVgVi\ f[\ Yf'?U]gYf\ Ui\ g'i\ bX'XYa\ \i\ [\ cg`Uk\]Yb'XYg'&$'''JU\f\i\ bXYfhg'YfZi\ f'''8]YgY'fY]Wk\ Y\ ;\ YgWk\]Wk\ hY'gd]Y[\ Y`h'g]Wk\ ']b'XYb'nU\`fY]Wk\ Yb'\]ghcf]gWk\ Yb'GhÀhhYb\ k\]XYfž'X]Y'GUfUYk\ c'ni\ 'V]YhYb'\ Uh''$

8]Y'5`hghUXh'6U éUf]'U']gh'XUg'<Yfn'j cb'GUfU'Yk c"'8]YgY
\]ghcf]gWXY'A Uf_h[Y[YbXž'X]Y']a '%) "'*J\\f\i bXYfh'[Y[fØbXYh k i fXYž'V]YhYh'Y]bY': Ø``Y'j cb'cga Ub]gWXYf'5fWX]hY_hi f"'<]Yf
Z]bXYb'G]Y'X]Y'VYfØ\a hY'GYV]`'!6fi bbYbž'Y]b'K U\fnY]WXYb'XYf
GhUXhž'XUg'U`g'HfYZZdi b_h'ZØf'9]b\Y]a]gWXY'i bX'Hci f]ghYb'X]Ybh"
9g']gh'b]WXh'bi f'Y]b'gWXObYf'5bV`]W_ž'gcbXYfb'Ui WX'Y]b'Gma Vc`
XYf'i fVUbYb'=XYbh]hÀh'j cb'GUfU'Yk c"'K À\fYbX'G]Y'Xi fWX'X]Y
Yb[Yb'; UggYb'gWX`YbXYfbž'_ObbYb'G]Y'X]Y'hfUX]h]cbY``Yb
<UbXk Yf_g`AXYbž'7UZÅg'i bX'A cgWXYYb'YbhXYW_Yb"

9]b k Y]hYfYg'_i `hi fY``Yg'<][\`][\h']gh'XYf'J]'Yāb]\WJž'XUg'U`hYFUh\Ui g'j cb 'GUfU'Yk cž'XUg']a 'a Ui f]g\WYb 'Gh]``YfVUi h'k i fXY"I fgdfØb[`]\W\'%, -* 'YfÒZZbYhž'k Uf'Yg'V]g'%-(- 'XYf'G]hn'XYfGhUXhj Yfk U`hi b["'@Y]XYf'k i fXY'XUg'; YVÀi XY'k À\fYbX'XYg6cgb]Yb_f]Y[g'g\W\kYf'VYg\W\ÀX][hž'UVYf'Yg'k i fXY'YfZc`[fY]\WfYghUi f]Yfh'i bX'VY\YfVYf[h'\Yi hY'X]Y'BUh]cbU`V]V`]ch\Y_"'8YfJ'\Ab]\WJ'ghY\h'gma Vc`]g\W\'Z\Øf'X]Y'FYg]`]Ybn'XYf'GhUXh'i bX']gh'Y]bVY`]YVhYf'Cfh'Z\Øf'_i `hi fY``Y'JYfUbghU`hi b[Yb"

p'Cfh'p'\\f'XYf'9fVUiib['p'Gh]\'p'6YgcbXYf\Y]hYb'p

p
p
p

p; Un]!<i gfYj !6Y[!A cgWXYY'p'%)' %'p'C ga Ub]gWX 'p'K i bXYfgWX ÒbYf ≢bYbfUi a 'p

 $pJ] Y @b] WU p' \% - * 'p' A Ui f] gWX 'p' B Uh] cbU `V] V`] ch `Y _ \check{z}' _ i `hi fY``Y f H f Y ZZ d i b h 'p$

p'GYV]`^!6fi bbYb'p'%+)' 'p'C ga Ub]gWX'p'K U\fnY]WXYbž'HfYZZdi b_h'p

9]b 'GdUn]Yf[Ub['ØVYf'X]Y '@Uh]bg_U'āi df]'Už'X]Y '`UhY]b]gW\Y 6fØW_Yž']gh 'YVYbZU``g'Ya dZY\`Ybgk Yfh" 8]YgY '6fØW_Y']gh \]ghcf]gW\VYXYi hgUa ž'XU'\]Yf'XYf'5hhYbhUh'Ui Z'XYb'9fn\Yfnc[': fUbn : YfX]bUbX']a '\\J\f'\%-\%('ghUhhZUbXž'XUg'XYb'9fghYb'K Y`h_f]Y[Ui g`ÒghY"'<Yi hY']gh'X]Y'6fØW_Y'Y]b'VY`]YVhYf'Cfh'ni f'FYZYI]cb'i bXY]b'k]W\h][Yf'HY]``XYf'GhUXh[YgW\]W\hY"'

8]Y 'A Uf_U`Y!A Uf_h\U``Y']gh'Y]b'k Y]hYfYf'k]W\h][Yf'Cfh']b
GUfUYk cž'VYgcbXYfg'ZØf': Y]bgW\a YW_Yf''' <]Yf'_ÒbbYb'G]Y'`c_U`Y
GdYn]U`]hÀhYb'_cghYb'i bX'XUg'U``hÀ[`]W\Y'@YVYb'XYf
9]b\Y]a]gW\Yb'Yf`YVYb''8]Y'A]gW\i b['Ui g'5fca Yb'i bX': UfVYb
a UW\h'XYb'5i ZYbh\U`h']b'XYf'A Uf_h\U``Y'ni 'Y]bYa
i bj Yf[Ygg`]W\Yb'9f`YVb]g"

8 UfØVYf`\]bUi g`]gh`XUg`GUfUYk c`Hi bbY``A i gYi a `Y]bY`hfU[]gWXYž UVYf``Y\ffY]WXY`GhÀhhYž`X]Y`Ub`X]Y`6Y`U[Yfi b['j cb`GUfUYk c k À\fYbX`XYg`6cgb]Yb_f]Y[Yg`Yf]bbYfh"`8Yf`Hi bbY`ž`XYf`X]Y`GhUXh a]h'XYa :: `i [\UZYb'j YfVUbXž'gd]Y`hY'Y]bY'YbhgW\Y]XYbXY'Fc``Y'ZØfX]Y'6Yj Ò`_Yfi b['i bX'XYb'BUW\gW\i V'k À\fYbX'XYg'?cbZ]_hg"6Ygi W\Yf'\UVYb'X]Y'A Ò[`]W_Y]hž'Y]bYb'HY]`'XYg'Hi bbY`g'niYf_i bXYb'i bX'a Y\f'ØVYf'X]Y'; YgW\]W\hY'i bX'XYb'K]XYfghUbXXYf'A YbgW\Yb'k À\fYbX'X]YgYf'gW\k]Yf][Yb'NY]h'ni 'YfZU\fYb"

8]Y'GhUXh'\Uh'Ui W\'Y]bY'J]Y`nU\``j cb'?i bgh[U`Yf]Yb'i bX'Ai gYYbž X]Y'XUg'_i `hi fY``Y'9fVY'6cgb]Yb'i bX'< YfnY[ck]bUg'dfÀgYbh]YfYb" Ni a '6Y]gd]Y`'V]YhYh'XUg'Ai gYi a 'ZØf'a cXYfbY'?i bgh'Y]bYb gdUbbYbXYb'9]bV`]W_']b'X]Y'9bhk]W_`i b[Yb'XYf'nY]h[YbÒgg]gW\Yb ?i bgh'XYf'FY[]cb"

#D 'GUfU'Yk c'VY[Y[bYb'g]Wk'Ui Wk'j]Y`Y'FY`][]cbg[Ya Y]bgWkUZhYb"

8]Y'?Uh\YXfU`Y'XYg'<Y]`][Yb'; Ycf[gž'X]Y'; Un]!<i gfYj!6Y[!

A cgWkYY'i bX'X]Y'GmbU[c[Y'ghY\Yb'U``Y']b'fY`Uh]j'_i fnYf

9bhZYfbi b['j cbY]bUbXYf'i bX'nYi [Yb'j cb'XYf'J]Y`ZU`h'XYf

fY`][]ÒgYb'DfU_h]_Yb']b'XYf'GhUXh''8]YgY', VYf`Uddi b['V]YhYh'XYb

6Ygi WkYfb'X]Y'; Y`Y[Yb\Y]hž'X]Y'Hc`YfUbn'i bX'XYb': f]YXYb'ni

Yf`YVYbž'ZØf'XYb'X]Y'GhUXh'VY_Ubbh']gh"
</pre>

6Yj cf'G]Y'GUfU'Yk c'j Yf'UggYbž'gc``hYb'G]Y'i bVYX]b[h'NY]h']a
HcfUb'cf!GU]X g'7UZÅ'j YfVf]b[Ybž'Y]bYa 'XYf'À`hYghYb'7UZÅg']b'XYf
GhUXhž'i a 'Y]bYb'hfUX]h]cbY``Yb'Vcgb]gWXYb'?UZZYY'ni '[Yb]Y»Yb"
8]YgYf'Cfh']gh']XYU`ž'i a 'XUg'`YVYbX][Y'GhUXh`YVYb'ni 'VYcVUWXhYb
i bX'g]WX'a]h'9]b\Y]a]gWXYb'Ui gni hUi gWXYb"

#bg[YgUa hi_ca V]b]Yfh'GUfUYk c'UhYa VYfUi VYbXY'@UbXgW\UZhYb
a]h'Y]bYa 'h]YZYb'\]ghcf]gW\Yb'i bX'_i `hi fY``Yb'9fVYžXUg'YXYb
6Ygi W\Yf']b'gY]bYb'6Ubb'n]Y\h"'9g'[]Vh'i bnÀ\`][Y'; YgW\]W\hYb'ni
YbhXYW_Yb'i bX'7ca a i b]hmg'ni 'Yf`YVYbž'X]Y'Y]bYb'V`Y]VYbXYb
9]bXfi W_'\]bhYf`UggYbž'k À\fYbX'G]Y'Xi fW\'X]Y'GhfU»Yb'X]YgYf
[YgW\]W\hghfÀW\h][Yb'GhUXh'k UbXYfb"'K Ybb'G]Y'a Y\f
#bZcfa Uh]cbYb'ØVYf'GUfUYk c'i bX'gY]bY'5hhfU_h]cbYb'gi W\Ybž
VYgi W\Yb'G]Y'X]Y'cZZ]n]Y``Y'K YVgY]hY'j cb'6cgb]Yb'i bX
< YfnY[ck]bU"</pre>

8]Y nUi VYf\UZhYb K UggYfZÀ``Y j cb ?fUj]WU i bX]\fY ; Y\Y]a b]ggY

8]Y K UggYfZÀ``Y j cb?fUj]WUž]a 'GØXYb'j cb'6cgb]Yb'i bX < YfnY[ck]bU'[Y`Y[Ybžg]bX'Y]b'UhYa VYfUi VYbXYg'BUhi fk i bXYf i bX'Y]bYg'XYf'gW\ObghYb'FY]gYn]Y`Y'XYg'@UbXYg"'8]YgY VYY]bXfi W_YbXYb'K UggYfZÀ``YžX]Y'g]W\']b'XYf'BÀ\Y'XYg'_`Y]bYb 8cfZYg'Ghi XYbW]'VYZ]bXYbž'g]bX'Y]b'ZYghYf'6YghUbXhY]``XYg BUhi fdUf_g'?fUj]WU'i bX'n]Y\Yb'YXYg'\J\f'nU\`fY]W\Y'6Ygi W\Yf Ub"'A]h'Y]bYf'<O\Y'j cb'V]g'ni '&) 'A YhYfb'i bX'VfY]hYb'?Ug_UXYbž X]Y'gUbZh']b'XUg'_`UfY'[fØb`]W\!V`Ui Y'K UggYf'Y]bYg'bUhØf`]W\Yb GW\k]a a VYW_Ybg'ghØfnYbž']gh'?fUj]WU'Y]b'Cfhž'XYf'X]Y'<YfnYb j cb'BUhi f`]YV\UVYfb']a 'Ghi fa 'YfcVYfh"

8]Y'K UggYfZÀ``Y'YfghfYW_Yb'g]W\'ØVYf'Y]bY'@Àb[Y'j cb'fi bX'%&\$
A YhYfb'i bX'V]`XYb'Y]bY'gdY_hU_i `ÀfY'?i `]ggYž'X]Y': chc[fUZYb'i bX
B Uhi f`]YV\UVYf'[`Y]W\Yfa U» Yb'Ubgdf]W\h''I a [YVYb'j cb'Ødd][Ya
; fØb'i bX'_`UfYa 'K UggYf'V]YhYh'XUg'; YV]Yh'Y]bY'hfUi a \UZhY
?i `]ggY'ZØf'Yf\c`gUa Y'GdUn]Yf[Àb[Y'cXYf'Y]b'D]W_b]W_']b'XYf
B Uhi f"'8]Y'GW\Òb\Y]h'XYf'?fUj]WU'K UggYfZÀ``Y'YbhZU`hYh'g]W\
VYgcbXYfg']a ': fØ\`]b['i bX'ZfØ\Yb'Gca a Yfž'k Ybb'XYf
K UggYfghUbX'Ua '\ÒW\ghYb']gh'i bX'X]Y'?Ug_UXYb']b'j c``Ya '; `Ubn
YfghfU\`Yb"

9]b][Y']bhYfYggUbhY': U_hYb'ØVYf'X]Y'K UggYfZÀ``Y'jcb?fUj]\\U.

- 8]Y'K UggYfZÀ``Y'V]`XYb'g]W\'Ui g'XYa ': `i gg'HfYV] Uhž'XYf g]W\'k]Y'Y]b'6UbX'Xi fW\'X]Y'@UbXgW\UZh'gW\`Àb[Y`h"
- ?fUj]WU'k Uf'Y]bgh'Y]b'[Y\Y]a Yg'i bX'i bVYfØ\fhYg BUhi f'i k Y`ž'XUg'Yfgh']b'XYb'`YhnhYb'\\\\fnY\bhYb hci f]gh]gW\'YfgW\`cggYb'k i fXY"
- 8]Y'K UggYfZÀ``Y'g]bX'Y]b'VY`]YVhYg'N]Y`'ZØf'GWk]a a Yfž ?U'U_ZU\fYf'i bX'5VYbhYi Yf'i gh][Y"
- a 'Gca a Yf'Z]bXYb'\]Yf'nU\`fY]WXY': Ygh]j U`g'i bX

 J YfUbghU`hi b[Yb'ghUhhž'X]Y'X]Y'bUhØf`]WXY'GWX Òb\Y]h'XYf

 F Y[]cb'ZY]Yfb"

9]b'GdUn]Yf[Ub['ni'XYb'K UggYfZÀ``Yb']gh'Y]b'Aigg'ZØf'YXYb 6Ygi W\Yf"'8Yf'K Y['ZØ\fh'XifW\'gW\Uhh][Y'C`]j Yb\U]bY'ibX'V]YhYh UhYa VYfUiVYbXY'5igV`]W_Y'UiZ'X]Y'a U`Yf]gW\Y'la[YVib["'=b'XYf BÀ\Y'XYf'K UggYfZÀ``Y'[]Vh'Yg'Ui W\'_`Y]bY'7UZÅgž']b'XYbYb
FY]gYbXY'Y]bY'9fZf]gW\ib['[Yb]Y»Yb'cXYf'g]W\'a]h'Y]bYa
hfUX]h]cbY``Yb'; YhfÀb_'ghÀf_Yb'_\ObbYb'''K Yf'VYgcbXYfg'a i h][']ghž
Ubb'XUg'YfZf]gW\YbXYž'\UfY'K UggYf'XYf'?Ug_UXYb'Ui gdfcV]YfYb
i bX']b'XYb'_\Y]bYb'Dcc\g'g'gW\k]a a Yb''

8]Y: `cfU'i bX: Ui bU'fi bX'i a '?fUj]WU']gh'j]Y`ZÀ`h]["'<]Yf'[]Vh'Yg nU\`fY]W\Y'DZUbnYbUfhYbž'XUfi bhYf'Ui W\`Y]b][Y'YbXYa]gW\Y DZUbnYb"'Jc[Y`VYcVUW\hYf'\UVYb'X]Y'A Ò[`]W_Y]hž'j YfgW\]YXYbY Jc[Y`UfhYb']b']\fYf'bUhØf`]W\Yb'I a [YVi b['ni 'VYcVUW\hYb"'Jcb; fY]Zj Ò[Y`b'V]g'\]b'ni 'Vi bhYb'G]b[j Ò[Y`b'[]Vh'Yg'j]Y``ni YbhXYW_Yb"

2 ZZbi b[gnY]hYb i bX 9]bhf]hhgdfY]gY

NY]hfUi a	² ZZbi b[gnY]hYb	9]bhf]hhgdfY]g
5df]`' '≯b]	\$, .\$\$``&\$.\$\$) ⁻ 65A
≯`] 5i[igh	\$, .\$\$``&%.\$\$	%\$ 65A
GYdhYa VYf	\$, .\$\$` '%\$\$) ⁻ 65A
C_hcVYf		

8]Y'K UggYfZÀ``Y'g]bX'b]W\h'bi f'Y]b'Cfh'XYf'bUhØf`]W\Yb'GW\\Ob\Y]hž gcbXYfb'Ui W\'Y]b'_i `hi fY``Yg'9fVY" = a Yf'k]YXYf'k YfXYb']a; YV]Yh'fi bX'i a '?fUj]WU': i bXY'Ui g'XYf'6fcbnY!'i bX'9]gYbnY]h [Ya UW\hž'X]Y'X]Y'`Ub[Y'; YgW\]W\hY'XYf'FY[]cb'VY`Y[Yb"'8]Y K UggYfZÀ``Y'gY`Vgh'k YfXYb'j cb'XYb'9]b\Y]a]gW\Yb'U`g'\Y]`][Yf Cfh'VYhfUW\hYhž'i bX'Yg'[]Vh'j]Y`Y'@Y[YbXYb'i bX'; YgW\]W\hYbž'X]Y g]W\'i a 'g]Y'fUb_Yb"

: Øf:5VYbhYi Yf`i gh][Y'V]YhYh'X]Y'l a [YVi b['Y]bY'J]Y`nU\``j cb 5_h]j]hÀhYb"'BYVYb'GWk]a a Yb'i bX'K UbXYfb'_Ubb'a Ub'\]Yf Ui W\FUX'ZU\fYb'cXYf'gc[Uf'YbhgdUbbYbXY'6cchgZU\fhYb i bhYfbY\a Yb"'8]Y'bU\Y[Y`Y[YbYb'GhÀXhY'k]Y'@'l Vi _]'i bX'è]h`i _ V]YhYb'k Y]hYfY'A Ò[`]W_Y]hYbž'X]Y'`c_U`Y'?i `hi f'i bX'; Ughfcbca]Y ni YbhXYW_Yb"

Hfchn XYgʻni bY\a YbXYb Hci f]ga i gʻ\Uhʻg]WX '? fUj]WUʻgY]bYb i bVYfØ\fhYb '7\Ufa YʻVYk U\fh" FY]gYbXY 'k YfXYb XUni 'Yfa i h][hž

X]Y'BUhi fini 'fYgdY_h]YfYb'i bX'Ui Z'X]Y'l a k Y`hini 'UWkhYbži a X]YgYg'K i bXYf'XYf'BUhi f'ZØf'ni _ØbZh][Y'; YbYfUh]cbYb'ni VYk U\fYb"

K Y]hYfY ⇒Zcfa Uh]cbYb ni 'XYb K UggYfZÀ ``Yb j cb ?fUj]WU i bX
]\fYf'I a [YVi b['Z]bXYb G]Y 'Ui Z'XYf'cZZ]n]Y ``Yb K YVgY]hY '6cgb]Yb
i bX '< YfnY[ck]bU 'Hci f]ga i g" D`UbYb G]Y → fYb 6Ygi W i bX
`UggYb 'G]Y 'g]W 'j cb XYf'A U[]Y 'X]YgYf'K UggYfZÀ ``Y 'j YfnUi VYfb °

? $i `]bUf]gWXY' <][\ `][\ hg'i bX'hfUX]h]cbY``Y$; Yf]WXhY'XYf'FY[]cb

6cgb]Ybii bXi<YfnY[ck]bUi]ghib]WXhibi fiZØfigY]bY
UhYa VYfUi VYbXYbi@UbXgWXUZhYbii bXifY]WXYbi\]ghcf]gWXYb
GWXÀhnYiVY_UbbhžigcbXYfbiUi WXiZØfigY]bYi_Òghi]WXYii bX
j]YiZÀih][Yi? ØWXY''8]Yi_i i]bUf]gWXYbiHfUX]h]cbYbiXYfiFY[]cbig]bX
ghUf_ijcbi]\fYfi; YgWX]WXhYii bXiXYbij YfgWX]YXYbYbi?i ihi fYbžiX]Y
\]Yfi[YgWXa]YXYhikii fXYbži[YdfÀ[h''6Y]Y]bYaif6Ygi WXi]bif6cgb]Yb
i bXi<YfnY[ck]bUigciihYia Ubig]WXiX]YiNY]hibY\aiybžiX]Yiic_UiYb
GdYn]Ui]hÀhYbiniidfcV]YfYbžiX]YiY]bik U\fYgi:YghiZØfiX]YiG]bbY
g]bX''

9]bY'XYf'VY_UbbhYghYb'GdYn]U`]hÀhYb']gh'âYj Ud]ž'_`Y]bYž'[Y[f]``hY: `Y]gWXfÒ``WXYbž'X]Y'cZh'Ui g'Y]bYf'A]gWXib['jcb'F]bX!'ibX@Ua a ZY]gWX'\Yf[YghY``h'k YfXYb"'8]YgY'_Ògh`]WXYb'<ÀddWXYbkYfXYb'hfUX]h]cbY```a]h'gcaib'fY]b'ZUWXYg'6fchŁ'ibX'ZY]b[Y\UW_hYb'Nk]YVY`b'gYfj]Yfh"'+b'j]Y`Yb'FYghUifUbhg'ibX'?cbcVUgfhfUX]h]cbY``Y'; UghghÀhhYbŁ'_Ubb'aUb'X]Y'VYghYb'âYjUd]'XYfFY[]cb'[Yb]Y»Yb"

9]b k Y]hYfYg; Yf]WkhžXUgʻa Ubʻb]Wkhj YfdUggYbʻgc``hYžʻ]ghʻ6i fY_"
8]YgYgʻ\Yfn\UZhY; YVÀW_ʻ]ghʻ[YZØ``hʻa]hʻY]bYfʻ`YW_YfYbʻA]gWki b[
Ui gʻ: `Y]gWkžʻ?ÀgYʻcXYfʻGd]bUhʻi bXʻi a \Ø``hʻj cbʻXØbbYa ʻHY][žʻXYf
_bi gdf][ʻ[YVUW_Ybʻk]fX"ʻ6i fY_ʻ_Ubbʻ]bʻi bhYfgWk]YX`]WkYb
J Uf]Uh]cbYbʻ[YZi bXYbʻk YfXYbžʻi bXʻYXYʻFY[]cbʻ\Uhʻ]\fʻY][YbYg
FYnYdh"ʻ5a ʻVYghYbʻgWka YW_hYfʻZf]gWkʻ[Yfc``hʻi bX'[c`XVfUi bʻUi g
XYa ʻCZYbžʻcZhʻqYfj]Yfh'a]hʻY]bYa ʻ≈[\i fh!8]d"

: Øf @]YV\UVYf j cb '9]bhÒd ZYb 'i bX '\Yfn\UZhYb 'A U\ `nY]hYb ']gh'
6Y[cj U 'ecfVU 'Y]b 'UVgc `i hYg 'A i gg" '8]YgYf 'hfUX]h]cbY ``Y '9]bhcdZ
Ui g 'XYa 'F Ui a 'GUfU'Yj cž Ui W\ 'U`g' 9]bhcdZ'XYg '6Ym 'VY_Ubbhž
VYghY\h'\Ui d hgÀW\`]W\ 'Ui g 'F]bXZY]gW\ ž'; Ya ØgY 'i bX 'Y]bYf
gdYn]Y``Yb 'A Y\`gW\ k]hnYž 'X]Y ']\a 'gY]bY 'WfYa][Y'?cbg]ghYbn
j Yf`Y]\h" '8]YgYf '9]bhcdZ']gh'VYgcbXYfg ']b 'XYb '_Ø\`Yb 'A cbUhYb
VY`]YVh'i bX 'k Àfa h'? ÒfdYf i bX 'GYY`Y"

8]Y FY[]cb]gh Ui W. VYfØ\a h ZØf]\fY 6U_`Uj UžY]bY gØ» Y
BUW gdY]gYžX]Y Ui g [YgW]W hYhYa :]`chY][ž B ØggYb i bX G]fi d
VYghY\h" 8]YgYf _ Ogh`]W Y ; Ybi gg k]fX \ Ai Z][VY] VYgcbXYfYb
5b`AggYb gYfj]Yfh i bX]gh Y]b VY`]YVhYf GbUW_ k A\fYbX XYg
BUW a]hhU[g_UZZYYg" 8]Y dYfZY_hY ? ca V]bUh]cb Ui g gØ» i bX
_bi gdf][a UW h Yg ni Y]bYf i bk]XYfghY\`]W Yb 8 Y`]_UhYggY"

9]b'k Y]hYfYg'<][\`][\h'XYf'Vcgb]gW\Yb'?ØW\Y']gh'; f]``YX':]g\ž
VYgcbXYfg']a '6YfY]W\'i a 'X]Y'BYfYhj U'i bX'X]Y'D`]j U'GYYb"
:]gW\Yf'Vf]b[Yb'hÀ[`]W\'Zf]gW\Yb':]gW\'Ui Z'X]Y'A Àf_hYž'XYf'XUbb
ØVYf'cZZYbYb': Yi Yfb'[Y[f]``h'k]fXž'i a 'XYb'Y]bn][Ufh][Yb
; YgW\a UW_'XYf'FY[]cb'ni 'Yf\U`hYb"'GYfj]Yfh'a]h'Zf]gW\Yb'GU`UhYb
i bX'\Ui g[Ya UW\hYa '6fch']gh'X]Yg'Y]bY'Y]bZUW\Yž'UVYf
i bk]XYfghY\`]W\Y'A U\`nY]h"

; Yf]W\h	6YgWxfY]Vib[6YgcbXYf\Y]h
â Yj Ud]	; Y[f]``hY	K]fX hfUX]h]cbY```a]h
	: `Y]gWX fÒ``WX Ybž	gca i b'i bX
	a Y]gh'Ui g'F]bX!'i bX	Nk]YVY`bʻgYfj]Yfh
	@Ua a ZY]gW\	
6i fY_	< Yfn\UZhYg'; YVÀW_	<pre> メXY FY[]cb \Uh']\fY</pre>
	a]h': `Y]gW\'cXYf	Y][YbY'JUf]UbhY
	Gd]bUh	
6Y[cj U [·] écfVU	7fYa][Yf [.] 9]bhcdZ	6Y`]YVh']b'XYb
	Ui g`F]bXZY]gWX`i bX	_Ø\`YfYb`AcbUhYb
	; Ya ØgY	
6U_`Uj U	GØ» Yg"; YVÀW_"Ui g	K]fX `\ Ài Z]['ni
	:]`chY]['ibX'BØggYb	VYgcbXYfYb
		5b`ÀggYbʻgYfj]Yfh
; Y[f]``hYf':]gW\	: f]gWXYf':]gWX'Ui g	; Yb]Y»Yb'G]Y'Yg'a]h

; Yf]W\h	0	6YgcbXYf\Y]h
	`c_U`Yb'; Yk ÀggYfb	Zf]gWXYa 'GU`Uh'i bX
		6fch

 $8]Y _i `]b Uf]g W Yb `9f`Y Vb]g g Y `]b `6c g b] Yb `i b X `< Yfn Y [ck]b U `Yb X Yb Yxc W `b] W h V Y] `X Yb `< Ui d h [Yf] W h Yb "8] Y `F Y []cb `\ Uh `Ui W `Y] b Y \ Yf Ui g f U [Yb X Y `? UZZ Y Y _i `hi f " `6c g b] g W Yf `? UZZ Y Y `]g h Y] b i b j Yfn] W h V Uf Yf `H Y] ` X Y g `h A [`] W Yb `@ Y V Y b g `i b X `k]f X `c Zh `]b `Y] b Y f g d Yn] Y ` Yb `? UZZ Y Y _Ub b Y ž `X Ya `X Ynj Už `ni V Y f Y] h Y h " `9f `k]f X `g h U f _i b X ` Uf ca Uh] g W `g Y f j] Y f h ž `c Zh `a]h Y]b Ya `G h Ø W _ `Ni W _Y f `c X Y f `Y]b Ya _ `Y]b Yb `G h Ø W _ ` `c _i a `f H Ø f _] g W Y f `8 Y `] [\ hg Ł " 8] Y `? UZZ Y Y d Ui g Y `] g h b] W h b i f `Y] b `A ca Y b h `X Y g `; Y b i g g Y g ž g c b X Y f b `Ui W `Y] b Y ; Y `Y [Yb \ Y] h ž `g] W `ni `Y b h g d Ub b Y b `i b X `X] Y `; Y g Y ``g W U Zh `ni [Yb] Y » Y b "$

8]Y'A YbgWXYb']b'6cgb]Yb'i bX'<YfnY[ck]bU'Y[Yb'[fc»Yb'K YfhUi Z'; UghZfYi bXgWXUZhž'i bX'XUg'9ggYb']gh'Y]b'nYbhfU'Yf'6YghUbXhY]`X]YgYg'K YfhYg''6Y]'Y]bYa '6Ygi WX'gc'`hYb'G]Y'i bVYX]b[h']b'Y]b`c_U'Yg'Ni \Ui gY'Y]b[Y'UXYb'k YfXYbž'i a 'X]Y'YWXhY'Vcgb]gWXY; UghZfYi bXgWXUZhii bX'X]Y'ni [Y\Òf][Yb'_i `]bUf]gWXYb
?Ògh`]WX_Y]hYb'ni 'Yf`YVYb''CZh'k YfXYb'X]Y'H]gWXY'a]h'Y]bYf
J]Y`nU\`'j cb'; Yf]WXhYb'[YXYW_hZ'X]Y'X]Y'<Yfn`]WX_Y]h'i bX'X]Y': Ø``YXYf'_i `]bUf]gWXYb'HfUX]h]cbYb'XYf'FY[]cb'XUfghY``Yb''

 $8]Y'_i `]bUf]gWXYb' < O\Ydib_hY'ibX'hfUX]h]cbY``Yb'; Yf]WXhY 6cgb]Ybg'ibX' < YfnY[ck]bUg'g]bX'b]WXh'bif'BU\fib['ZØf'XYb'?OfdYfž'gcbXYfb'UiWX'ZØf'X]Y'GYY`Y'' > XYg'; Yf]WXh'YfnÀ\`h'Y]bY; YgWX]WXhYž'YXYg'6]ggYb']gh'Y]b'; YgWXa UW_'jcb'; YgWX]WXhY'ibX?i`hif''6Y]' = fYa 'bAWXghYb'6Ygi WX'gc``hYb'G]Y'ibVYX]b[h'Y]bYbD`Uhn'Ub'Y]bYa 'XYf'H]gWXY'fYgYfj]YfYbž'ia 'X]Y'Uih\Ybh]gWXYb 5fca Yb'X]YgYf'ZUgn]b]YfYbXYb'FY[]cb'ni'YbhXYW_Yb''$

5 V Y b h Y i Y f`] W X Y C i h X c c f! 5 _ h] j] h À h Y b 'ZØf B U h i f Z f Y i b X Y

6cgb]Yb'i bX'<YfnY[ck]bU']gh'Y]b'k U\fYg'DUfUX]Yg'ZØf'Ci hXccf! 9bh\i g]UghYbž'X]Y'X]Y'GW\Òb\Y]h'XYf'BUhi f'[Yb]Y»Yb'i bX'ni [`Y]W\ Ui ZfY[YbXY'5VYbhYi Yf'Yf`YVYb'a ÒW\hYb"'A]h'gY]bYf UVk YWkg`i b[gfY]WkYb`@UbXgWkUZh` 'j cb`a UYghÀh]gWkYb`6Yf[YbØVYf`X]WkhY`K À`XYf`V]g`ni '_`UfYb`: `ØggYb` 'V]YhYh`X]Y`FY[]cbnU\`fY]WkY`5_h]j]hÀhYbž`X]Y`gck c\``ZØf`5bZÀb[Yf`U`g`Ui Wk`ZØfYfZU\fYbY`5VYbhYi fYf`[YY][bYh`q]bX"

K UbXYfb']gh'j]Y``Y]W\h'X]Y'dcdi `ÀfghY'5_h]j]hÀh']b'6cgb]Yb'i bX < YfnY[ck]bU"8Ug'@UbX'V]YhYh'Y]bY'J]Y`nU\`'j cb'K UbXYfk Y[YbžX]Y'ZUbhUgh]gW\Y'5i gV`]W_Y'i bX'i bVYfØ\fhY'BUhi f'i a ZUggYb" 6YgcbXYfg'VYa Yf_Ybgk Yfh'g]bX'X]Y'K Y[Y']a '8i fa]hcf!
BUh]cbU`dUf_ž'k c'K UbXYfYf'X]Y'i bVYfØ\fhY'K]`Xb]g'Yf`YVYb'i bXX]Y'VYY]bXfi W_YbXYb'6Yf[`UbXgW\UZhYb'VYk i bXYfb'_ObbYb"'8]Y gW\k YfYfYb'Fci hYb'ZØ\fYb'G]Y'ni a '\OW\ghYb';]dZY`XYg'@UbXYgžXYa 'A U[`]āž'XYf'Y]bY'<O\Y'j cb'&"', *'A YhYfb'YffY]W\h"'9[U`ž'cVG]Y'Y]bYb'[Ya Øh`]W\Yb'GdUn]Yf[Ub['cXYf'Y]bY'Ubgdfi W\gj c``YK UbXYfi b['VYj cfni [Ybž']b'X]YgYa 'a U`Yf]gW\Yb'@UbX'k YfXYb'G]YZØbX]["

 $: \varnothing f'X]Y'5XfYbU`]b'fb_]Yg'ibhYf' \Rightarrow bYb']gh'FUZh]b['UiZ'XYa''_`UfYbKUggYf'XYg'BYfYhjU!: `iggYg'cXYf'XYg'IbU!: `iggYg'Y]bYUiZfY[YbXY'AÒ[`]WX_Y]h''8]YgY': `\ØggY'V]YhYb'b]WXh'bifUiZfY[YbXY'GhfcagWXbY``Ybž'gcbXYfb'UiWX'UhYaVYfUiVYbXYBUhifgnYbUf]Ybž'X]Y'G]Y'kÀ\fYbX' \Rightarrow fYf'K]`XkUggYfhcifYb[Yb]Y\rightarrow Yb''_\ObbYb'''AY\fYfY'`c_U`Y'5bV]YhYf'V]YhYb'[YZ\lambdarrow fhYfK]UZh]b[hcifYb'Ubž'X]Y']XYU`'Z\lambdaf'; fiddYb'ibX': Ua]`]Yb'g]bX'''<]Yfg]bX'Y]b][Y'9adZY\`ib[Yb.$

- BYfYhj U'F UZh]b[''A Ug_]fbc
- I bU'5_h]j U' '6]\Uã
- FUZh]b['7YbhYf'HUfnUb' '?cb']W

? `YhhYfb`i bX`6ci `XYfb`g]bX`YVYbZU``g`VY`]YVhY`5_h]j]hÀhYbž`X]Y j]Y`Y`5VYbhYi fYf`Ubn]Y\Yb"`=a `<cW\[YV]f[Y`XYf`8]bUf]XYb`Z]bXYbG]Y`X]j YfgY`: Y`gYbž`X]Y`gck c\``ZØf`5bZÀb[Yf`U`g`Ui W\`ZØf : cfh[YgW\f]hhYbY`[YY][bYh`g]bX"`8Yf`?`YhhYfYl hfYa dUf_`]b 6 Y`U b]\W\`V]YhYh`g]\W\YfY`i bX`[i h`YhUV`]YfhY`Fci hYbž`k À\fYbX`X]Y : Y`gYb`]b`XYf`l a [YVi b['j cb`A cghUf`gck c\``gdcfh`]\W\Y`U`g`Ui \W\YbhgdUbbYbXY`A O[`]W_Y]hYb`V]YhYbž`i a `X]Y`BUhi f`\Ui hbU\`ni Yf`YVYb"

9]b'k Y]hYfYg'Ui ZfY[YbXYg'5VYbhYi Yf']gh'XUg'A ci bhU]bV]_Yb" 6cgb]Yb'i bX'<YfnY[ck]bU'\Uh'nU\`fY]W\Y'A ci bhU]bV]_Y!GhfYW_YbžX]Y'gW\a U`Y'DZUXY'i bX'\YfUi gZcfXYfbXY'<Ø[Y`Xi fW\ei YfYb" FUXZU\fYf'_ObbYb'X]Y'JcfhY]`Y'XYf'gcbbYbj Yfk O\bhYb@UbXgW\UZhii bX'XYf'gdY_hU_i `AfYb'5i gV`]W_Y'Ui Z'X]Y'6Yf[Y'i bXHA`Yf'[Yb]Y»Yb"'8]Y'FY[]cb'fi bX'i a '\$U\cf]bUž'k c'X]Y
C`ma d]gW\Yb'K]bhYfgd]Y`Y'%-, ('ghUhhZUbXYbž'V]YhYh'Hci fYb'Xi fW\k i bXYfgW\ObY'GnYbYf]Ybž'X]Y'gck c\``ZØf'5bZ\b[Yf'U`g'Ui W\'ZØfYfZU\fYbY'FUXZU\fYf'[YY][bYh'g]bX"

K Ybb'G]Y'Yg'Yhk Ug'fi \][Yf'Ub[Y\Yb'a ÒW\hYbž'_ObbYb'G]Y'Ui W\
5b[Y`b']b'XYb'_`UfYb'; Yk ÀggYfb'XYf': `ØggY'i bX'GYYb'6cgb]Ybg
dfcV]YfYb"'8Yf'BYfYhj U!: `i gg'i bX'XYf'D`]j U!GYY'g]bX'VY_UbbhY
5b[Y`gdchgž'X]Y'Y]bY'J]Y`nU\`'j cb':]gW\UfhYb'VY\YfVYf[Yb"'<]Yf
_ObbYb'G]Y'YbhgdUbbYb'i bX'X]Y'Zf]YX`]W\Y'I a [YVi b['[Yb]Y»Ybž
k À\fYbX'G]Y'Ui Z'XYb'[fc»Yb': Ub['k UfhYb"

 $: \emptyset f Y]bY [Ubn'VYgcbXYfY'9fZU\ fib['dfcV]YfYb'G]Y'XUg'7Ubmcb]b[']b'XYb'ZUgn]b]YfYbXYb'GWX'i WXhYb'XYf'FY[']cbž']bgVYgcbXYfY']b'XYf'?fUj]WU!GWX'i WXh''8]YgY'UVYbhYi Yf`]WXY'5_h]j]hÀh'_ca V]b]Yfh K UbXYfbž'GWXk]a a Yb'i bX'5VgY]`Yb'i bX'ZØ\fh'G]Y'Ub UhYa VYfUi VYbXY'CfhYž'X]Y'cZh'bi f'gWXk Yf'ni ['Àb['`]WX'g]bX'' @c_U`Y'5bV]YhYf'cf['Ub]g]YfYb'['YZØ\fhY'Hci fYbž'X]Y'\Rightarrow byb'gck c\`G]WXYf\Y]h'V]YhYb'U`g'Ui WX'XYb'BYfj Yb_]hnY`'XYg'5VYbhYi Yfg''$

<]Yf'Y]bY'_`Y]bY', VYfg]W\h'XYf'VY`]YVhYghYb'Ci h\xccf!5_h]j]h\h\h\b |b'6cgb]Yb'i b\x'< YfnY[ck]bU.

5_h]j]hÀh	CfhY	GWk]Yf][_Y]hg[fUX
K UbXYfb	8ifa]hcf!	@Y]WXh [*] V]g [*] gWXkYf

5_h]j]hÀh	C fhY	[GWK]Yf][Y]hg[fUX]
	BUh]cbU`dUf_ž'AU[`]ã	
FUZh]b[BYfYhj Už'l bU	JUf]]Yfh
?`YhhYfb	6 Y`U b]WUž'A cghUf	@Y]W\h`V]g`gW\k Yf
AcibhU]bV]_Yb	6Y`U b]WUž'*\cf]bU	JUf]]Yfh
$G_]ZU\ fYb$	メJ∖cf]bUž˙6Y`U b]WU	@Y]W\h`V]g`gW\k Yf
5b[Y`b	BYfYhj Už'D`]j U	: Øf'U``Y
7 Ubmcb]b[?fUj]WU	A]hhY`V]gʻgWkkYf

 $9[\ U\ \check{z}\ c\ V\ G]Y\ b\ U\ W\ Y\ b\ C\ X\ Y\ f\ Y\ b\ D\ W\ Y\ b\ C\ X\ Y\ f\ Y\ b\ U\ h\ f\]b\ Y\ b\ C\ b\ Y\ b\ C\ i\ b\ X\ c\ Y\ f\ Y\ Y\ b\ Y\ b\ a\ O\ W\ h\ Y\ b\ Z\ Y\ b\ Y\ b\ C\ i\ b\ X\ c\ f\ B\ U\ h\ i\ b\ Y\ b\$

8]Y VYghYb 'H]ddg 'ZØf 'Y]bY i bj Yf[Ygg`]W Y FY]gY 'Xi fW 'X]Y 'GhÀXhY i bX '8 ÒfZYf

%" 9bhXYW_Yb G]Y X]Y J]Y`ZU`h`XYf GhÀXhY

- 8]Y'6UgWUfg]'U'fb`hghUXhL'a]h']\fYb'hfUX]h]cbY``Yb < UbXk Yf_qqhÀbXYb
- 8]Y'; Un]'<i gfYj !VY['A cgWX YY'i bX'UbXYfY'\]ghcf]gWXY fY`][]ÒgY'GhÀhhYb
- 8]Y'J fY`c'6cgbYž'X]Y'a U`Yf]gWXY'EiY``Y'XYg': `i ggYg

9]b'k Y]hYfYf'k]W\h][Yf' < U`h']gh'\X]Y'GhU\Xh'\A cgh\Uf\z'\Yf\Ø\\a h'\Z\Øf'\X]Y]_cb]g\W\Y'\Gh\Uf]'\A cgh'\f\b`\hY'\6f\Ø_Y\\\L''' <]\Yf'\Yf\`\Y\\b'\G]\Y.

- KibXYfgW\ObY'5igV`]W_Y'UiZ'X]Y'BYfYhjU
- HfUX]h]cbY``Y`FYghUi fUbhg`Ua :: `i ggi ZYf
- 8]Y'U`hY'6UnUfghfU»Yž'X]Y'nia'6iaaY`b'Y]b`ÀXh

&" - 9f Y V Y b G Y X Y A b X W Y ? i hi f

 $6 Y g i W Y b G Y 8 O f Z Y f k Y 6 U U X X U g U a : i y Y Y b Y f ? `] d d Y \\ [Y Y [Y b Y] g h Y <] Y f _ O b b Y b G] Y X] Y 6 U U M H Y _ _ Y V Y g] W h] [Y b Z Y] b \\ g Y \ f k] W h] [Y f C f h Z Ø f X] Y Y] g ` U a] g W Y ? i ` hi f " 8] Y f i \] [Y \\ I a [Y V i b [Ti b X X Y f b U \ Y [Y Y [Y b Y : ` i g g V] Y h Y b U i y Y f X Y a \ Y f j c f f U [Y b X Y : c h c a O [`] W _ Y] h Y b "$

' "'?i`]bUf]gW\Y'9f`YVb]ggY

Bi hnYb'G]Y'X]Y'; Y`Y[Yb\Y]hž'X]Y'`c_U`Y'?ØW\Y'ni 'dfcV]YfYb"6Ygi W\Yb'G]Y'hfUX]h]cbY``Y'FYghUi fUbhg'i bX'dfcV]YfYb'G]Y.

- 6i fY_'f[YZØ``hY'HY][hUgWXYbŁ
- GUfa U'f?c\`fci `UXYbŁ
- 6U_`Uj U'U`g'gØ» Yg'8 YggYfh

G]WX 'Ui Z'X]Y 'Gi WX Y 'bUWX 'Y]bYa '[i hYb 'D`Uhn 'ni 'a UWX Ybž']gh'Y]bY \Yfj cffU[YbXY 'A O[`]WX_Y]hž'a Y\f'ØVYf'X]Y '`c_U`Y '?i `hi f'i bX ; UghZfYi bXgWX UZh'ni 'YfZU\fYb"

 $("JYf_Y\fga]hhY`ibX:cfhVYkY[ib[$

 $8]Y `VYghY `A \ \grave{O}[\ `]WX_Y]h\check{z}'g]WX `]bbYf\U`V`XYf`Gh\grave{A}XhY`i bX`8 \grave{O}fZYf Zcfhni VYk Y[Yb\check{z}']gh'cZh'ni :: i » \check{z}'XU`X]Y`a Y]ghYb GY\Ybgk ØfX][_Y]hYb`bU\Y`VY]Y]bUbXYf``]Y[Yb"`8 UfØVYf`\]bUi g []Vh'Yq.$

- ² ZZYbh`]W\Y'JYf_Y\fga]hhY``k]Y'6i ggY'i bX GhfU» YbVU\bYbž'VYqcbXYfg']b'GUfU'Yj c
- JYfa]Yhi b['j cb': U\ffÀXYfb'ZØf'9f_i bXYb'XYf'l a [YVi b[
- : $U\fX]YbghY\cXYf\HUI\]g\Z\emptysetf\Ab[YfY\GhfYW\Yb]$

) "I $bhYf_\emptyset bZhY$ a $]h^.7 \setminus UfaY$

; Yb]Y» Yb'G]Y' \Rightarrow fYb'5i ZYbh\U`h']b'6ci h]ei Y!<chY`gž'; Ugh\Ài gYfb i bX'DYbg]cbYbž'X]Y'cZh'j cb'9]b\Y]a]gW\Yb'VYhf]YVYb'k YfXYb" 6Y`]YVhY'Cdh]cbYb'g]bX.

- 5i VYf[Y'XY'`U'DU]I']b'GUfU'Yj c'V]YhYh'Y]bY'nYbhfU`Y @U[Y'i bX'ZfYi bX`]WXY'5ha cgd\ÀfY"
- < chY``A YdUgʻ]b`A cghUf`a]h`VYY]bXfi W_YbXYa `6`]W_`Ui Z X]Y`GhUXh"

*"6YgcbXYfYJYfUbghU`hi b[Yb'i bX: Ygh]j U`g

D`UbYb'G]Y' \Rightarrow fY'FY]gY'i a '`c_U`Y': YghY'i bX'J YfUbghU`hi b[Ybž'X]Y Y]b'Y]bn][Ufh][Yg'_i `hi fY``Yg'9f`YVb]g'V]YhYb'_ÒbbYb"'Ni 'XYb VYa Yf Ybgk YfhYb': Ygh]i U`q'[Y\ÒfYb.

9j Ybh	AcbUh	Cfh
A cghUf'6`i Yg	j`]	AcghUf
: Ygh]j U`		
DmfUa]X : Ygh]j U`	5i[igh	J]gc_c
⇒hYfbUh]cbU`	: YVfi Uf	GUfUΥj c
GUfU~Yjc~K]bhYf		
: Ygh]j U`		

8]YgY'JYfUbghU'hi b[Yb'n]Y\Yb'b]W\h'bi f'9]b\Y]a]gW\Yž'gcbXYfb Ui W\'6Ygi W\Yf'Ui g'U'`Yf'K Y'h'Ub'i bX'V]YhYb'Y]ba U`][Y 9f`YVb]ggY"

+"'FYgdY_h]YfYb'G]Y'`c_U`Y'6fÀi WXY'i bX HfUX]h]cbYb

9g']gh'k]W\h][ž'X]Y'?i `hi f'i bX'X]Y'; YdZc[Yb\Y]hYb'XYf 9]b\Y]a]gW\Yb'ni 'fYgdY_h]YfYb"'5W\hYb'G]Y'Ui Z'Zc`[YbXY'8]b[Y.

- ?`Y]Xi b[ž']bgVYgcbXYfY'VY]a '6Ygi W\'j cb'fY`][]ÒgYb GhÀhhYb''@Ub[Y'<cgYb'i bX'Ÿfa Y`'g]bX'Ya dZY\`Ybgk Yfh"
- 8]Y'6Ybi hni b['j cb'< UbXmg']b'?]fWXYb'i bX'A cgWXYYb gc``hY'fYgdY_hj c``i bX'a]h'6YXUWXh'YfZc`[Yb"

A]h'X]YgYb'H]ddg'Ui g[YghUhhYhž'g]bX'G]Y'VYfY]hž'6cgb]Yb'i bX < YfnY[ck]bU'ni 'Yf_i bXYb"'Jcb'XYf'BUhi f'ØVYf'?i `hi f'V]g'\]b'ni _i `]bUf]gW\Yb'9f`YVb]ggYb'[]Vh'Yg']b'X]YgYa 'ZUgn]b]YfYbXYb'@UbX j]Y`ni 'YbhXYW_Yb"

8 YhU1`a

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