

@Y\ f`]b[gdUf`Ua Ybh'&\$&) . 'K Y`g'' `ghÅf_h
dc`]h]gW\ Yg'6Yk i gghgY]b`]b`K]Yb`°

9b[U[]YfhY`@Y\ f`]b[Y`Ui g`[Ubn`² ghYffY]W\ ` [YghU`hYb`]a
K]YbYf`DUF`Ua Ybh`XYa c_fUh]gW\ Y`DfcnYggY`U_hj] `a]h`i bX
ghÅf_Yb`] \f`dc`]h]gW\ Yg'6Yk i gghgY]b`"



K]Ybž`² ghYffY]W\ `!`9bXY`A U]ZUbX`Y]b`Ui ZFY[YbXYg`9j Ybh`]a
ŌghYffY]W\]gW\ Yb`DUF`Ua Ybh`]b`K]Yb`ghUhh` `XUg`
@Y\ f`]b[gdUf`Ua Ybh'&\$&) "9]bY`%` !_ŌdZ[Y`8Y`Y[Uh]cb`XYf
6Yfi ZggW\i `Y`K Y`g'' `bU\ a `Ub`X]YgYf`VYXYi hYbXYb`J YfUbgU`hi b[
hY]`ž`X]Y`g]W\ ` [Ubn`XYf`U_hj] Yb`A]h[YghU`hi b[`XYa c_fUh]gW\ Yf
DfcnYggY`k]Xa YhY`"6YfY]hg`Ua `K Y`gYf`<Ui dhVU\ b\ cZ`bU\ a `X]Y
FY]gY`] \fYb`5bZUb[`i bX`ZŌ\ fhY`X]Y`Yb[U[]YfhYb`@Y\ f`]b[Y`ni f
, VYfbUW\ hi b[`]b`X]Y`› [YbX\ YfVYf[Y`6f][]hhYbUi "

8 Ug`Dfc[fUa a `XYg`dUf`Ua YbhUf]gW\ Yb`HfYZZYbg`cZZYf]YfhY`XYb
HY]`bY\ a YbXYb`X]Y`A Ō[`]W\ _Y]hž`b]W\ h`bi f`h\ YcfYh]gW\ Y
?Ybbhb]ggY`ŌVYf`8Ya c_fUh]Y`ni `Yf`Ub[Ybž`gcbXYfb`X]YgY`Ui W\
dfU_h]gW\ `ni `YfZU\ fYb`"Gc`VY[Ubb`XYf`YfghY`HU[`a]h`Y]bYa

ZY]Yf`]WXYb`9]b`Ugg`]bg`DUf`Ua`Ybhi`bX`Y]bYf`6Y[fØ»i`b[`Xi`fW`XYb`
YfghYb`B`Uh]cbU`fUhgdfÅg]XYbhYb`"5i`ZXYa`Dfc[fUa`a`ghUbX`i`bhYf`
UbXYfYa`X]Y`?`i`VZ]bXi`b[žX]Y`U`g`YfghYf`GWXf]h`ni`f`dc`h]gWXYb`
A`Y]bi`b[gV]`Xi`b[`X]YbhY`"6Y]Y]bYf` : Ø\fi`b[`Xi`fW`XUg`
VYY]bXfi`W`YbXY`DUf`Ua`Ybhg[YVÅi`XY`VY`_Ua`Yb`X]Y`@Y\`f`]b[Y`
Y]bYb`h]YZYb`9]bV`]W`_]b`X]Y` ; YgW`]W`hY`XYf`ÒghYffY]W`]gWXYb`
8Ya`c`_fUh]Y`"

Dc`h]gWXY`5fVY]h`\Ui`hbU\`Yf`YVYb`

⇒ J`Yf`Ui`ZXYg`@Y\`f`]b[gdUf`Ua`Ybhg`U[`XYf` : c`_i`g`ni`bY\`a`YbX`
Ui`ZXYf`dc`h]gWXYb`5fVY]h`"⇒`Y`ZY`_h]j` [YghU`hYhYb`?`i`Vg]hni`b[Yb`
i`bX`5i`ggW`ØggYb`k`i`fXYb`_`hi`Y`Y` [YgY`gW`UZh`]WXY`H\`Ya`Yb`
X]g`_i`h]Yfhi`bX`5bhfÅ[Y`Zcfa`i`]Yfh`"8]Y`Ni`gUa`a`YbUfVY]h`a`]h`
YW`hYb`DUf`Ua`YbhUf]Yfb`ghY`hY`ZØf`j`]Y`Y`HY]`bY\`a`YbXY`Y]bYb`
VYgcbXYfYb`<`Ø\Ydi`b`_h`XUf`"5a`9bXY`XYf`J`YfUbghU`hi`b[`
dcg]YfhYb`X]Y`@Y\`f`]b[Y`ghc`n`ZØf`Y]b` ; fi`ddYbZchc`]a`Y\`fk`ØfX][`Yb`
D`YbUfgUU`"

9]b`N]Y`X]YgYf`Ni`gUa`a`Yb`_i`bZh`k`Uf`Ygž`XUg`J`YfghÅbXb]g`ZØf`
XYa`c`_fUh]gWXY`DfcnYggY`ni`ZØfXYfb`i`bX`X]Y`6YXYi`hi`b[`U`_h]j`Yf`
A`]hVYgh]a`a`i`b[`ni`i`bhYfghfY]WXYb`"8]Y`HY]`bY\`a`YbXYb`_`Y\`fhYb`
a`]h`Y]bYa` [YghÅ`_`hYb`dc`h]gWXYb`6Yk`i`gghgY]b`bUW`
C`VYf`ÒghYffY]W`ni`fØW`"G]Y`k`YfXYb`]`fY`9fZU\`fi`b[Yb`
k`Y]hYfhfU[Yb`i`bX`]`fY`A`]hgW`Ø`Yf`.]bbYb`ØVYf`X]Y`K`]W`h][`_Y]h`XYf`
dc`h]gWXYb`DUfh]n]dUh]cb`]bZcfa`]YfYb`"

A`cXYfbYg`@Y\`f`]b[gZcfi`a`]a`

DUf`Ua`Ybhgi`a`ZY`X`

⇒ X]YgYa`?`cbhYI`h]gh`XUg`@Y\`f`]b[gZcfi`a`XYg`DUf`Ua`Ybhg`Y]bY`
k`Yfhj`c`Y`9f[Åbni`b["9g`V]YhYhYb[U[]YfhYb`đ` [YbX`]WXYb`Y]bYb`
9]bV`]W`_]b`XYb` ; YgYhn[YVi`b[gdfcnYggi`bX`X]Y`U`bXY`bXYb`
DYfgcbYbž`k`]Y`B`Uh]cbU`fUhgUV[YcfXbYhY`i`bX`A`]h[`]YXYf`XYg`
6i`bXYgfUhYg`"5i`ZXYb`K`cf`_g`cdg`_`ØbbYb`X]Y`@Y\`f`]b[Y`
5bhk`c`fhYb`Ui`Z`nU\`fY]WXY` : fU[Yb`ni`f`9bhghY\`i`b[`j`cb` ; YgYhnYb`
i`bX`dc`h]gWXYb`5`_hYi`fYb`Yf\`U`hYb`"Ni`XYa`VYghY\`h`X]Y`

A Ò[`]W_X]h'ni f'HY]'bU\ a Y'Ub'CB@B9'@Y\ f]b[gZcfYb'Ui g'XYa
?'UggYbn]a a Yf'cXYf'Ui g'XYb'6Yhf]YVYb"

8]Y': cfa UHY'fY]W_XYb'j cb' CB@B9'@Y\ f]b[gZcfi a ' 'DUf'Ua Ybh ž
ØVYf' CB@B9'@Y\ f]b[gZcfi a ' '8Ya c_fUh]Y 'V]g'\]b'ni ' CB@B9
@Y\ f]b[gZcfi a ' 'Dc`h]_Yf.]bbYb "': Øf'X]Y'HY]'bU\ a Y'k YfXYb
'YX][`]W_X]b'j]XYc_cbZYfYbnZ\`][Yf'D7'cXYf'@Udhcd'gck]Y
k Y]hYfY'; YfÅhY'a]h'K YVWJa ž'A]_fcZcb'i bX'@Ui hgdfYWX Yf
VYbØh][h''9fghY'6i WXi b[Yb'ZØf'X]Y'K cf_g\cdg]a 'GWXi `U\ f
&\$&' #&('g)bX'VYfY]hg'a Ò[`]W_X"

8Ya c_fUh]YV]'Xi b['ZØf'† b[Y'A YbgW_XYb ghÅf_Yb

9]b'k Y]hYfYg'5i [Yba Yf_'Ui Z'X]Y'8Ya c_fUh]YV]'Xi b['ZØf'† b[Y
A YbgW_XYb'k]fX'Xi fW_X]Y'k]ggYbgW_XUZh]W_XY'6Y['Y]hghi X]Y'ja
?ca dYhYbnbYhmk Yf_' 8Ya c_fUh]YV]'Xi b['ja 'ž [YbXU'hYf ' [Y'Y[h'
≠'X]YgYf'Ghi X]Y'k]fX'X]Y'U_h]j Y'A]h[YghU'hi b['j cb'ž [YbX'W_XYb
]b'8Ya c_fUh]YV]'Xi b[gdfc'Y_hYb'i bhYfgi W_Xh''8]Y'9f[YVb]ggY
nY][Ybž'XUgg'† b[Y'A YbgW_XYb' l bhYfghØhni b[ž'5bYf_Ybbi b['i bX
K YfhgW_XÅhni b['ZØf']\fY'6YhY']][i b['VYbØh][Yb''8]Y'5i hcf.]bbYbž
XUfi bhYf'DfcZYggcYb'j cb'fYbca a]YfhYb' l b]j Yfg]hÅhYbž'YfhY]Yb
g]YVYb' [fi bX'Y[YbXY'<UbX'i b[gYa dZY\`i b[Yb'ni f'k Y]hYfYb
J YfVYggYfi b['XYf'8Ya c_fUh]YV]'Xi b["

8i fW_X'5b[YVchY'k]Y'XUg'@Y\ f]b[gdUf'Ua Ybhi bX'XUg
@Y\ f]b[gZcfi a 'k]fX'X]Y'XYa c_fUh]gW_XY'?'i 'hi f']b'^2 ghYffY]W_X
[YghÅf_h''8]Y'DUfh]n]dUh]cb'† b[Yf'A YbgW_XYb'Ub'dc`h]gW_XYb
DfcnYggYb']gh'YbhgW_XY]XYbX'ZØf'X]Y'Ni _i bZhi bgYfYf'8Ya c_fUh]Y"
8UVY]']gh'b]W_Xh'bi f'XUg'@YfbYb'ØVYf'X]Y'5V'Åi ZY'k]W_Xh][ž'gcbXYfb
Ui W_X]Y'U_h]j Y'HY]'bU\ a Y' 'XYbb'8Ya c_fUh]Y'`YVh]j cb'XYf
A]h[YghU'hi b['U`Yf'6Øf[Yf.]bbYb"

8YhU]`g	
C fh	K]Ybž'^2 ghYffY]W_X
E i Y`Yb	• k k k "h]dg"Uh

8YhU]`g

- `Y\f`]b[gZc fi a "dUf`Ua Ybh"Uh
- k k k "X_`g"XY

6Ygi W\Yb`G]Y`i bg`Ui Z.`a Y]b!k]Yb"bYh