

## ? Ua dZi a '2 ghYffY]WXg'6i X[Yh. GWXbYX`]hn'k Ufbh'j cf'9l! 8YZ]n]hj YfZU\fYb°

: D² !; YbYfU`gY\_fYhÀf`A ]WWUY``GWWbYX`]hn`\Uh`gWWUfZY'?f]h]\_'Ub
XYb`dc`]h]gWWYb`5i ggU[Yb`XYg`GD²!J]nY\_Ubn`Yfg`5bXfYUg
6UV`Yf`[YØVhžX]Y`X]YgYf`]a '² %! ≈i fbU``ni '; Ugh `[Ya UWWh\Uh''`GWWbYX`]hn`g]Y\h`]b`6UV`Yf`Y]bYb`JYfhfYhYf`Y]bYf
JYf`]YfYf!5a dY``i bX`VYgWWi`X][h]\bž`g]WW`j cf`U``Ya 'Ui Z
A UWWhYf\U`h'i bX`DcghYbgWWUWWYf`ni '\_cbnYbhf]YfYb'''9f
k Ufbhž`XUgg`X]Y`Dc`]h]\_'XYf`GD² ii bhYf`6UV`Yf`²ghYffY]W\\
]b`Y]b`9I!8YZ]n]hj YfZU\fYb`ghYi Yfb'\_ObbhYž`k Ug
k Y]hfY]WWYbXY'?cbgYei YbnYb`ZØf`X]Y`Vi X[YhÀfY
Gci j YfÀb]hÀh`XYg`@UbXYg`\ÀhhY`i bX`a Ò[`]WWYfk Y]gY`ni
\O\YfYb`N]bgYb`Ui Z`GhUUhgUb`Y]\Yb`ZØ\fYb`k ØfXY'''9]b
nYbhfU`Yg`5b`]Y[Yb`j cb`GWWbYX`]hn`]gh`6UV`Yfg`J YfhY]X][i b[
XYf`Bca ]b]Yfi b[`XYg`Y\Ya U`][Yb`²J D!?Ubn`Yfg`?Uf`
BY\Ua a Yfž`X]Y`Yf`U`g`dUfhY]dc`]h]gWW`a ch]j ]Yfh'\_f]h]g]Yfh''
Ni XYa '/ Ua d∧Y``]d/



: D² !; YbYfU`gY\_fYhÀf`A ]W\UY``GW\bYX`]hn`\Uh`gW\UfZY`?f]h]\_'Ub`XYb dc`]h]gW\Yb`5i ggU[Yb`XYg`GD² !J ]nY\_Ubn`Yfg`5bXfYUg`6UV`Yf [YØVhž'X]Y`X]YgYf`]a '² %!  $\approx$ i fbU``ni '; Ugh '[Ya UW\h`\Uh"

GW.bYX`]hn`g]Y\h`]b`6UV`Yf`Y]bYb`JYfhfYhYf`Y]bYf` JYf`]YfYf!5a dY` i bX`VYgWi `X][ h`]\bž`g]W\`j cf`U``Ya `Ui Z`A UW\hYf\U`h`i bX DcghYbgW\UW\Yf`ni `\_cbnYbhf]YfYb"`9f`k Ufbhž`XUgg`X]Y`Dc`]h]\_`XYf GD² `i bhYf`6UV`Yf`² ghYffY]W\` ']b`Y]b`9I !8YZ]n]hj YfZU\fYb ghYi Yfb`\_ÒbbhYž`k Ug`k Y]hfY]W\YbXY`?cbgYei YbnYb`ZØf`X]Y Vi X[ YhÀfY`Gci j YfÀb]hÀh`XYg`@UbXYg`\ÀhhY`i bX`a Ò[`]W\Yfk Y]gY ni `\Ò\YfYb`N]bqYb`Ui Z`GhUUhqUb`Y]\Yb`ZØ\fYb`k ØfXY"

9]b 'nYbhfu`Yg '5b`]Y[Yb'j cb'GWXbYX`]hn']gh'6UV`Yfg'J YfhY]X][ib[XYf'Bca]b]Yfib['XYg'Y\YaU`][Yb'2JD!?Ubn`Yfg'?Uf`'BY\UaaYfžX]Y'Yf'U`g'dUfhY]dc`]h]gWX 'ach]j]Yfh'\_f]h]g]Yfh''NiXYa'Ài » YfhGWXbYX`]hn'6YXYb\_Yb'\]bg]WXh`]WX'XYf'DYfgcbU`]Y'XYg'XYg][b]YfhYb^2:6!DfÀg]XYbhYb' $\approx$ gYZ'DfÒ``ž'XYf'YVYbZU``g']a'JYfXUWXh'ghY\hždc`]h]gWXY' $\Rightarrow$ bhYfYggYb'j cfUbnihfY]VYb'''8UfØVYf'\]bUig'VYaÀb[Y`hGWXbYX`]hn'6UV`Yfg'aUb[Y`bXYg'9b[U[YaYbh'U`g'Kc\ba]b]ghYfZØf'A]YhYf']b''^2ghYffY]WX'ibX'g]Y\h'X]Y'ghUf\_YbA

< Ui g\U`hg\_f]gY`i bX`k ]fhgW\UZh`]W\Y`< YfUi gZcfXYfi b[Yb

8]Y '6i X[Yh'U[Y'XYg'@UbXYg'ghY\h'i bhYf'8fi W\_ž'XUg'[YgW\AhnhY 6i X[Yh'cW\Y'\Ai Zh'g]W\"Ui Z'WU"'%\A' ]``]UfXYb'9i fcžk Ug'X]Y
FY[]Yfi b['j cf'[fc\"Y'< YfUi gZcfXYfi b[Yb'ghY\`h"'8]YgY'Z]bUbn]Y``Yb
9b[d\AggY'\UVYb'X]Y'< UbgYgh\XhY'i bX'X]Y'?cU\]h]cbgdUfhY]Yb
XUni '[Ynk i b[Ybž'9]bgdUfi b[Yb']b'<\O\Y'j cb'\*\ž'-'A]``]UfXYb'9i fc
]b'X]YgYa '\\\fi bX'\ØVYf'\&'A]``]UfXYb'9i fc']a 'b\AW\ghYb'\\\f\
Y]bni \Y]hYb\Z'k cXi fW\']bg[YgUa h', \Z+'A]``]UfXYb'9i fc'Y]b[YgdUfh k YfXYb'gc\`Yb"'6i bXYg\_Ubn\Yf'7\f]gh]Ub'Ghc\W\_Yf'VYnY]W\bYhY'X]Y
J Yf\UbX\`i b[Yb'nk]gW\Yb'XYf'\Z' J D\Z'GD\Z' i bX'BYcg'U\g'\Ai \"Yfgh\\YfUi gZcfXYfbX'i bX'VYhcbhY'X]Y'5V\\Ab[][\_Y]h'XYf
Dfc'Y\_hi a gYhni b['j cb'XYf':]bUbn]YfVUf\_Y]h'X]YgYf'9]bgdUfi b[Yb"

?i fnY`K YfVYY]bV`YbXi b[

8]Y'K]fhgW\UZhgdfc[bcgYb'jYf\Y]»Yb'kYb]['; i hYg.': Øf'XUg'Xf]hhY \\\f']b': c`[Y'k]fX'a]h'Y]bYa'k]fhgW\UZh`]W\Yb'FØW\_[Ub[[YfYW\bYhž'kUg'X]Y':]bUbn`U[Y'ni gÀhn`]W\'VY`UghYb'\_\ObbhY'' K]fhgW\UZhgZcfgW\Yf'kUfbYbž'XUgg'X]Y'[Yd`UbhYb

9]bgdUfi b[ga U»bU\a Yb'b]W\h'Ui gfY]W\Ybži a 'Y]b'Yi fcdÀ]gW\Yg 8YZ]n]hj YfZU\fYb'ni 'j Yfa Y]XYb"'8Yf': ]g\_U`fUh'dfc[bcgh]n]Yfh'ZØf X]YgYg'\J\f'Y]b'8YZ]n]h'j cb'(\ž%i 'i bX'ZØf'XUg'\_ca a YbXY'\J\f'j cb' \\ \ž i "'Hfchn'X]YgYf'i b\Y]`j c``Yb'Jcf\YfgU[Yb'nY][h'g]W\'X]Y?cU`]h]cb'cdh]a ]gh]gW\\ž'X]Y'9I!Jcf[UVYb'j cb'' i '8YZ]n]h'Y]b\U`hYbni '\_\ObbYb"

6`]W\_'Ui Z'X]Y'6i X[YhYbhk]W\_`i b[

8]Y '6i X[YhYbhk]W\_`i b[ 'ZØf'X]Y 'JJ\fY'&\$&( 'i bX'&\$&) 'k ]fX'U`g\YfUi gZcfXYfbX'Ub[YgY\Yb"8]Y 'BYhhcZ]bUbn]Yfi b[gVYXUfZY'XYg6i bXYg'j cb 'Jbi Uf'V]g'GYdhYa VYf'&\$&( 'VY`Ui ZYb'g]W\jcfUi gg]W\h`]W\'Ui Z'%) ž( 'A ]``]UfXYb'9i fc"'6YgcbXYfg'Ui ZZÀ``][ 'g]bXX]Y 'ghUf\_'[Ygh]Y[YbYb'5i g[UVYbž'X]Y i a '%' ž%'i ']a 'JYf[`Y]W\ni a 'Jcf'U\fini [Ybca a Yb'\UVYb'i bX'j cf'U``Ya 'Xi fW\'\O\YfYDYbg]cbgUi g[UVYb'i bX'XYb'bYi Yb':]bUbnUi g[`Y]W\'VYX]b[h'g]bX"

#bg[ YgUa h'ghY``h'X]Y'dc`]h]gWXY'i bX'k ]fhgWXUZh`]WXY'@U[ Y
2 ghYffY]WXg'Y]b'\_ca d`YI Yg'; YZØ[ Y'XUfž']b'XYa 'ghfUhY[ ]gWXY
9bhgWXY]Xi b[ Yb'i bX'Y]bY'\_cbg]ghYbhY': ]bUbndc`]h]\_'j cb'[ fÒ» hYf
6YXYi hi b[ 'g]bXž'i a 'X]Y'<YfUi gZcfXYfi b[ Yb'XYf'Ni \_i bZh'ni
a Y]ghYfb"'8]Y'\_f]h]gWXYfY'8]g\_i gg]cb'i a 'X]Y'6i X[ Yhdc`]h]\_'k ]fX
b]WXh'bi f'j cb'dc`]h]gWXYb'5\_hYi fYbž'gcbXYfb'Ui WX'j cb'9I dYfhYb
[ YbUi 'VYcVUWXhYh'</pre>

 $: \emptyset f `XYhU]``]YfhY `&DZcfa Uh]cbYb `i bX'k Y]hYfY `9bhk ] \underline{W}`i b[YbYa dZY\`Yb'k ]fž'X]Y `6Yf] WAhY `Ui Z'CHGž'DfcZ]``i bX'DUf`Ua Ybh'ni j YfZc`[Yb"$ 

 $Cfh'XYg'; YgWXYYbg8YhU]`g'ni f'A Y`Xi b[K Ug']gh \\ dUgg]Yfh3Gcbgh][Yg; YbUi Yf'Cfh'VY_Ubbh3K]Ybž'^2 ghYffY]WX6YghY \\ FYZYfYbnchg"UhK Y]hYfY'Ei Y``YbdfcZ]`"Uh$ 

Gci fW. X]Y!bUW f]W hYb"Uh

8 Y hU] `c

6Ygi WXYb G]Y i bg Ui Z b!U[ "XY