

5dYfh fU! =bffcXi n]cbY

=fU]Ubc

H\U] UbXYgY

B Y`dfYgYbhY`gh X]c#gU []c#Uj cfc`g]`UbXfUbbc`UX
YgUa]bUFY#bj Ygh[UFY#bU]nnUFY#bX]j]Xi UFY""
=bffcXi n]cbY [YbYfUY`UX`i bU`hYg]`c`UX`i b`gU []c

#

DYf`dchYf`f]gdcbXYfY`U`ei YghU`Xca UbXUž`a]
V`bWbhfYf] `]b`df]a c`i c[c`g` ""

DYf]bffcXi ffY`i bU`hYa U]W]gdW]Z]W]g` `W]`W]g]j`i c`Y`V`bWbhfUFY

@U`ei Ygh]cbY`Ä` []¼XU`a c`hc`hYa dc`X]` [fUbXY
]bhYfYggY`dYf` [`]`YgdYfh] `]b`a Uhf]U`

....

=bffcXi n]cbY [YbYfUY`X]`i bU`hYa U]W]

; YbYfU`a YbhY`UW`e`fU`Ä`U`hYg]`gW`bXc`U`ei U`Y""

...

=bffcXi n]cbY [YbYfUY`X]`i bU`hYa U]W]`bchU

HUY`hYa U]W]Ä`ghU`i b[Ua YbhY`X]gW]ggU""

...

=bffcXi n]cbY [YbYfUY`X]`i bU`hYa U]W]

GYddi fY`Ä`i bUb]a Y`WY""

...

=bffcXi n]cbY [YbYfUY`X]`i bU`hYg] [YbYfU`a YbhY`UW`e`fU`a U`WY`h`]bhYbX]`V`bffcVUhfYfY

DfYbXYbXc`]b`V`bg]XYfU]cbY`]`gY [i Ybh]`Z]hcf]""

...

Gj]`i ddc`XY`hYg`c`Y`]bffcXi n]cbY`U`U`hYg]`XY`c`gW]hcfY

5 HfU] Yfgc`ei YghfU]g]`g]`Ä`WfW]h`c`X]`]bX]j]Xi UFY""

...

Gj]`i ddc`XY`hYg`c`Y`]bffcXi n]cbY`U`U`hYg]`XY`c`gW]hcfY

I b`hYa U`f]V`ffYbhY`dUf`UbXc`X]`""`Ä`""

... ..

=bffcXi n]cbY`U`U`hYg]`df]bV]dUY

E i Ygh`c`ZYbca Ybc`Ä`gh`c`cgYfj`Uhc`Ya d]f]W]a YbhY
]b`X]j`YfgY`cW]g]cb]"

...

9bZUg]`g` ``f]a dcf]UbnUXY`h`i`c`gh`X]c

5`X]`¼X]`W]`WY []¼Ä`gh`c`gW]h`c`U`Xca UbXUž
U`hcfbc`U`U`ei U`Y`fi`chU`ei Ygh`c`gh`X]cž`Ä`""

....

8 YZ]b]n]cbY`XY]`V`bhYbi`h]`XY`c`gh`X]c`fYU`]nnUhcžj`]YbY`XYZ]b]h`c`Xcdc`i`bf]bffcXi n]cbY [YbYfUY

GVf]hi fU'UWUXYa]W 5dYfh fU



E i YgUf]WfWU'Ygd'cfU`Y`WU gY'X]''''

...

8YZ]b]n]cb] XY`Y`]b]Ybn]cb] XY`Uf]WfWU

; `]i`h]a]V`bhf]Vi h]U`U`hYa U]WU'a cgfUbc`WXY''''

...

DYf`U`XYZ]b]n]cbY`XY`g]dYfY`UWUXYa]V`Yg]gYb]h`g` `Uei Yg]cbY

≡`a]c`cV]Yh]j c`Ä`ei Y`c`X]''''

...

DYf`U`XYZ]b]n]cbY`XY`[`]`cV]Yh]j] XY`Uf]WfWU

8U`c`gi X]c`Ya d]f]V`X]''''žg]di Î`V`ta dfYbXYfY`]b

...

a Ub]YfU`YgU` f]Yb]h''''

DYf`U`XYg]v]n]cbY`XY`a`YrcXc`]a d]Y[Urc`Y`XY`[`]`UgdYh]`WbhfU`] XY`U`hYg]

5dYfh fU!`8YZ]b]n]cb]

≠U]Ubc

H\U]`UbXYgY

GYV`bXc`U`XYZ]b]n]cbY`XU`U`XU''''`]`hYfa]bY]bX]W''''

....

...

DYf`U`XYZ]b]n]cbY`X]i`b`hYfa]bY

≠b`ei Yg]c`V`b]hYg]c`]`hYfa]bY`]bX]W''''

...

DYf`U`XYZ]b]n]cbY`X]i`b`hYfa]bY

DYf`i`bU`a][`]`cf`V`ta dfYbg]cbY`XY`U`ei Yg]cbY`Ä

...

]a dcf]U`b]h`VX]Uf]fY`]`g][b]Z]V`h`c`XY`hYfa]bY''''

DYf`U`XYZ]b]n]cbY`X]i`b`hYfa]bY

≡`hYfa]bY''''g]f]Z]f]gW`U''''

...

...

DYf`U`XYZ]b]n]cbY`X]i`b`hYfa]bY

GYWVYbY`U`XYZ]b]n]cbY`[YbYfU`Y`XY`hYfa]bY`g]U'''']b

...

...

i`bU`X]j Yfg]U`WVn]cbY`g]di Î`V`bg]XYfU`Y''''

DYf`U`XYZ]b]n]cbY`X]i`b`hYfa]bY`WXY`Ug]U`UdYf]h`j Uf]Y`d`cgg]V`]h]4X`]b]hYdfY]h]cbY

GYV`bXc`''''`]`hYfa]bY`Ugg]a`Y`]`g][b]Z]V`h`c`X]''''

...

...

DYf`U`XYZ]b]n]cbY`X]i`b`hYfa]bY`WXY`Ug]U`UdYf]h`j Uf]Y`d`cgg]V`]h]4X`]b]hYdfY]h]cbY

''''di Î`Ugg]a`YfY`X]j Yfg]U`WVn]cb]''5`W]b]

...

...

f]WfV`h`c`f]V`b]V`fX]Ubc`g`]Z]h`c`WXY`]`hYfa]bY`]b

ei Yg]cbY`d`cgg]U`]bX]WVY''''

DYf`U`XYZ]b]n]cbY`X]i`b`hYfa]bY`WXY`Ug]U`UdYf]h`j Uf]Y`d`cgg]V`]h]4X`]b]hYdfY]h]cbY

GVf]hi fU'UMWXYa]W 5dYfh fU



""bX]W] [YbYfUa Ybh""
DYf`U'XYZ]b]n]cbY`X]i b`hYfa]bY`WXY`Ug]U'UdYfh]j Uf]Y'dcgg]V`]h4X]]bhYdfYfh]cbY

E i UbXc`g]`dUf`U'X]""`fja a U[]bY`WXY` [YbYfUa Ybh
g]`U'Ä`ei Y`U'X]""
DYf`U'XYZ]b]n]cbY`X]i b`hYfa]bY`WXY`Ug]U'UdYfh]j Uf]Y'dcgg]V`]h4X]]bhYdfYfh]cbY

8 i Y`Vfyj]`YgYa d]`dcgg]cbc`YggYfy`Xf]i]i hc`U`U
V`a dfYbg]cbY`XY`V`bW]hc"
5ggYfn]cbY [fU]Y`U`U`ei UY`Ä`dcgg]V`Y`Uddcf]UfY`XY [`]`YgYa d]`dyf`U'XYZ]b]n]cbY`X]i b`V`bW]hc

æ]a dcf]ubhY`YbZ]h]n]UfY""
DYf`V`bW]b]f]UfY`f]h]Ybn]cbY`g] `U`h] U'XYZ]b]n]cbY

7]`V`bW]b]f]YfYa c`g] ""
8YZ]b]n]cbY`W]g] UY`X]i b`hYfa]bY

⇒b`V`bW] g]cbY`Ä`b`W]gg]Uf]c`XYZ]b]fY`]`g] [b]Z]W]hc
X]""
J Yfg`U`Z]bY`X]i b`dUfU [fUzc`z`dyf`U'XYZ]b]n]cbY`X]i b`hYfa]bY

E i Y`c`WXY`g]]bhYbXY`X]fY`V`b`ei Yg]c`Ä`WXY""
DYf`i bfi`hYf]cfY`gd]Y [U]n]cbY`XY`U'XYZ]b]n]cbY`c`dYf`Zcfb]fY`XY [`]`YgYa d]

Gcbc`g]U'Y`Zcfb]hY`bi a YfcgY`gd]Y [U]n]cb]"
5ggYfn]cbY`dYf`W]Uf]fY`i`hYf]cfa YbhY`i bU'XYZ]b]n]cbY

E i Yg]U'XYZ]b]n]cbY`g]`ZcbXU`g]`V]gU`#Yf]j U""
DYf`U'XYZ]b]n]cbY`XY`dfYg] ddcg]`XY`U'XYZ]b]n]cbY

; `]`YgYa d]`UddYbU`W]h]`g]]bhY [fUbc`bY`U
XYZ]b]n]cbY`X]""
DYf`U'XYZ]b]n]cbY`X]i b`hYfa]bY`U]f]Y Yfg`XY [`]`YgYa d]

GYV`bXc`""z`U]f]`U]b]c`dYf]`g]c]h]Ybi hc`WXY""
I`g]hc`bY`W]g]`]b`W]`U`V`b]h]Vi`hc`X]i b`YgdYfh`UW]Ubc`Z]hc`g] [i]hc`V`b]h]Vi`h]`a]bcf]`U`U'XYZ]b]n]cbY`X]i b`hYfa]bY"

5dYfh fU!`=dchYg]
=H]U]bc

H\U]`UbXYgY

GVf]hi fU'UWXYa]W 5dYfh fU

@Uei Ygh]cbY'WbhfUY'Ä'Xi bei Y. Vta Y'di Î "" Uj Yfy
XY[]'YZYH]g' ""

. "" "" 3

DYf`U'XYZ]b]n]cbY'XY`f]dchYg]

7cbg]XYfUbXc`WY""i b`YgJa Y'd]Ö'UddfcZcbX]hc`XY]
ZUh]`WY[UfUb]gW""

""

""

DYf`U'XYZ]b]n]cbY'XY`f]dchYg]

I bUXY]bUX]'Ubb]'ZU""Y""Uj j]Ufcbc`i b`X]VU]hc
]bhc]bc`U`U'Xca UbXU'gY""

%"\$
""

""

. ""

DYf`U'XYZ]b]n]cbY'XY`f]dchYg]

E i Ygh]U'f]WfW]g]f]j c`[Y'U""g]'i ddUbXc`Y'hYghUbXc
i bU'gYf]Y'X]'dchYg]'WY]'bX]Wbc`Vta Y""dcggJ
Uj Yfy'XY[]'YZYH]g' ""

""

""

""

DYf`U'XYZ]b]n]cbY'XY`f]dchYg]

GY[i YbXc`] `fU[]cbLa Ybhc`dcf]hc`Uj Ubh]'XU""g]
di Î]dch]nnUfY""

""

""

DYf`U'XYZ]b]n]cbY'XY`f]dchYg]

5`Wb]X]'ei Ygh]'Uf[ca Ybh]'gcbc`g]h]'Zcfa U]m]h]
XU""a U'bYgg] bc`X]'Ygg]'Ä'g]hc`Z]bcfU'VtbZYfa`hc`

""

DYf]b]hcXi ffY`f]dchYg]'Y'[UfUb]fY`fi b]V]h]4XY`f]ubU]g]

9j]XYbhYa YbhY'bi a Yfcg]'gcbc`] Z]hc]f]'WY
]bZi]g]bc`g' ""

""

DYf`dfYgyb]UfY]'Z]hc]f]'f]'Yj Ubh]'dYf]'`hi c`gi X]c`Y`U'hi U]dchYg]

""'hfcj Î`i b]ja dcf]ub]hY`VtffY`h]cbY`ZfU""Y""

""

""

""

DYf`dUf`UfY'XY`Y'f]WfWY'X]'ei U'Wb`U'hfc`ja dcf]ub]h]'dYf]'`hi c`gi X]c`