



# ARTS1510

☯hfcXi Wc fm; Yfa Ub '5

HYfa 'Hk c ''##'&\$&%

7ci fgY`Cj Yfj ]Yk

GHJZ7cbHJW`8YHJ]`g

7cbj Ybcfg

|                |                          |                |                      |                      |
|----------------|--------------------------|----------------|----------------------|----------------------|
| B Ua Y         | 9a U]`                   | 5j U]`UV]`]m   | @cW]h]cb             | D\cbY                |
| 8Yb]gY`< UbhY` | X"\UbhY`4 i bgk "YXi "Ui | VmUddc]bħa Ybh | A cfj Yb`6fck b &' ( | \$&'-\$*)<br>&\$, \$ |

Hi ħcfg

|                    |                                   |              |          |       |
|--------------------|-----------------------------------|--------------|----------|-------|
| B Ua Y             | 9a U]`                            | 5j U]`UV]`]m | @cW]h]cb | D\cbY |
| GUv]bU`Ni `cj ]W   | g"ni `cj ]W i bgk "YXi "Ui        |              |          |       |
| B ]W]c`Ug`9bf][ \h | b]W]c`Ug"Ybf][ \h4 i bgk "YXi "Ui |              |          |       |

GW]cc`7cbHJW]`bZcfa Uh]cb

GW]cc`cZ<i a Ub]h]Yg`UbX`@Jb[ i U[ Yg

@cW]h]cb. `GW]cc`C Z]W]žA cfj Yb`6fck b`6i ]X]b[ ž@Yj Y`ž&),

CdYb]b[ `<ci fg.`A cbXUm!`: f]XUmž`- Ua `!`) da

D\cbY. `ž\*%&`-' , ) `%\*, %

: U! . ž\*%&`-' , ) `; , +\$)

9a U]. [\U`4 i bgk "YXi "Ui](#)

# 7ci fgY'8YHJ`g

7fYX]hDc]bHg`\*`

Gi a a UfmicZhY'7ci fgY

Ʒmci`UfY`bHfYghYX`b`YUfb]b[`hY`a`cghWta`a`cb`mgdc\_Yb`Zfgh`Ub[`i`U[`Y`]b`9i`fcdY`UbX`\\Uj`Y`bc`df]cf`\_bck`YX[Y`cZ`hY`];`Yfa`Ub`Ub[`i`U[`Y`z`hY`b`];`fdaVgUfack`9Wd`S`3`]g`hY`f][`\\hWci`fgY`Zc`f`mci`"6UgYX`cb`U`Wta`a`i`b]WU]j`Y`UbX`hUg`!VUgYX`UddfcUWX`z`h`g`Wci`fgY`]g`XYg][`bYX`hc`\\Y`d`mci`ei`]W`mXYj`Y`cd`mci`f`dfcZ]W]YbWn]b`VUg]WcfU`UbX`k`f]hY`b`];`Yfa`Ub`"J`cWUvi`UfmUbX`VUg]W;`Yfa`Ub`[`fUa`a`Uf`UfY`dfYgYbH`X`]b`W`b`H`I`hg`h`U`h`UfY`fY`Yj`UbhZc`f`Yj`YfmXUm`Ub[`i`U[`Y`i`gY`"Ʒmci`UfY`U`Zfgh`h`a`Y`Ub[`i`U[`Y`YUfbYfz`k`Y`k`]"`Ye`i`d`mci`k`]h`VUg]W`Ub[`i`U[`Y`YUfb]b[`ghfUH`[`]Yg`hc`a`U`\_`Y`mci`f`YUfb]b[`dfcW`gg`a`cfY`YZY`W]j`Y`"H`\\Y`Wci`fgY`]b`f`c`Xi`W`g`mci`hc`]a`dc`f`U`b`h`Z`J`W`h`g`c`Z;`Yfa`Ub`gc`W]Y`h`Yg`UbX`W`h`fY`UbX`z`]b`h`]g`k`Umz`[`j`Y`mci`U`VY`H`f`i`b`XY`f`g`h`U`b`X]b[`c`Z`]Z`]b`];`Yfa`Ub`!gdYU\_]b[`Wci`b`f`]Yg"

H\\]g`Wci`fgY`]g`U`VY`[`]bbYfg!`Yj`Y`Ub[`i`U[`Y`Wci`fgY`"5`gh`XYbHg`k`\\c`\\Uj`Y`\\UX`gca`Y`Yi`dYf]YbW`k`]h`h`Y`Ub[`i`U[`Y`z`Y]h`Y`f`Ug`U`\\Y`f]hU[`Y`Ub[`i`U[`Y`c`f`h`f`c`i`[`\\`d`f`Y`]c`i`g`]b`g`h`f`i`W]cbz`a`i`gh`Z`]"b`h`Y`d`U`W`a`Y`bh`ei`Y`gh`c`b`b`U]fY`Uj`U]UV`Y`Uh`\\h`f`d`g`#A`U`"U`f`h`g`"i`b`g`k`"Y`X`i`"U`i`#`g`h`X`Y`b`h`g`#`W`c`i`f`g`Y`g`#`U`b[`i`U[`Y`!`d`U`W`a`Y`b`h`g`"M`c`i`k`]"`b`c`h`V`Y`d`Y`fa`]h`X`hc`Y`b`f`c`]b`U`Ub[`i`U[`Y`Wci`fgY`h`U`h`]g`hc`c`Y`U`g`m`i`Z`c`f`mci`"Ʒ`h`]g`c`W`W`f`g`z`mci`k`]"`V`Y`f`Y`ei`Y`g`h`X`hc`W`X`Ub[`Y`mci`f`Y`b`f`c`a`Y`b`h`"

# 7ci fgY`@YUfb]b[`C`i`hWta`Yg

- %`I`gY`U`j`YfmVUg]WfUb[`Y`c`Z`]c`WUvi`UfmUbX`d`\\f`U`g`Y`g`]b`];`Yfa`Ub`UbX`Udd`m`U`Z`Y`k`]g`]a`d`Y`fi`Y`g`c`Z`[`fUa`a`Uf`"
- &`I`bXYfghUbX`UbX`i`gY`h`Y`];`Yfa`Ub`Ub[`i`U[`Y`]b`g`\\c`f`h`]b`H`f`U`W`]c`b`g`]b`Z`J`a`]Uf`Y`j`YfmXUm`g]h`U`h`]c`b`g`" `I`gY`j`YfmVUg]W`g`h`f`U`h`[`]Y`g`hc`a`U`]b`h`U`]b`Wta`a`i`b]WU]j`c`b`"
- ("Ʒ`Y`b`h`]z`m`g`c`a`Y`Z`Y`U`h`f`Y`g`c`Z`]b[`i`]g`h`W`U`b`X`W`h`i`f`U`X`j`Y`f`g`]m`z`]b`W`i`X]b[`h`Y`j`U`f`Y`X`b`U`h`f`Y`c`Z`h`Y`];`Yfa`Ub`!gdYU\_]b[`k`c`f`X`"
- )`F`Y`Z`Y`W`i`c`b`Y`U`fb]b[`dfcW`gg`UbX`Y`U`fb]b[`ghfUH`[`]Y`g`"

# HYUWX]b[`G`h`f`U`h`[`]Y`g`

H`\\`Y`h`U`W`X`]b[`ghfUH`[`]Y`g`c`Z`c`i`f`];`Yfa`Ub`WUggYg`UfY`VUgYX`cb`h`Y`Wta`a`i`b]WU]j`Y`UbX`hUg`!VUgYX`UddfcUWX`z`k`\\]W`U`]a`U`h`[`j`]b[`gh`XYbHg`c`d`d`c`f`h`b`]h`Y`g`hc`dfUW]W`h`Y`f`Wta`a`i`b]WU]j`c`b`]g`]b`W`b`H`I`hg`h`U`h`UfY`d`Y`f`g`c`b`U`m`f`Y`Yj`UbhUbX`W`b`b`Y`W`Y`X`hc`Yj`YfmXUm`]Z`"H`\\i`g`z`gh`XYbHg`Y`U`fb`U`j`YfmUi`h`Y`b`h`]W`i`g`Y`c`Z`h`Y`];`Yfa`Ub`Ub[`i`U[`Y`Wta`V`]b`Y`X`k`]h`W`h`i`f`U`UbX`\\]g`h`c`f`]W`\_`b`c`k`Y`X`"H`\\Y`Y`U`fb]b[`a`U`h`f`U`f`d`f`]b`h`U`b`X`X][`h`U`E`UbX`Y`U`fb]b[`U`W]j`]h`Y`g`f`Y`["`c`b`]b`Y`h`U`g`\_`g`z`ga`U`h`U`g`\_`g`d`f`c`Y`W`g`]b`g`]X`Y`UbX`ci`h`g`]X`Y`h`Y`WUggf`c`c`a`z`g`\\c`f`h`Z`W]c`b`U`UbX`b`c`b`!Z`W]c`b`U`h`I`hg`E`d`f`c`]X`Y`gh`XYbHg`k`]h`j`U`f`Y`X`c`d`d`c`f`h`b`]h`Y`g`hc`dfUW]W`h`Y`f`f`Y`W`d`h`j`Y`UbX`d`f`c`Xi`W]j`Y`g`\_`g`z`U`g`k`Y`U`g`h`Y`f`j`c`WUvi`UfmUbX`VUg]W;`Yfa`Ub`[`fUa`a`Uf`K`Y`Y`b`Wci`fU[`Y`gh`XYbHg`hc`i`gY`gi`]h`U`V`Y`Ub[`i`U[`Y`YUfb]b[`ghfUH`[`]Y`g`z`UbX`hc`]b`X`Y`d`Y`b`X`Y`b`h`m`d`f`U`W]W`c`f`f`Y`j`g`Y`h`Y`f`];`Yfa`Ub`g`\_`g`c`b`U`f`Y`[`i`Uf`VUg]g`z`]b`g`]X`Y`UbX`V`Y`m`c`b`X`h`Y`WUggf`c`c`a`"H`\\Y`Ub[`i`U[`Y`c`Z`]b`g`h`f`i`W]c`b`]g`d`f`Y`X`c`a`]b`U`b`h`i`m`];`Yfa`Ub`fUdUf`h`Z`c`a`gca`Y`Yi`d`U`b`U`h`]c`b`c`Z`[`fUa`a`U`h`W`"Z`Y`U`h`f`Y`g`E`g`c`h`U`h`g`h`XYbHg`X`Y`Y`cd`h`Y`f`]"gh`Y`b]b[`g`\_`]g`"b`V`c`h`"Y`W`i`f`Y`UbX`h`hc`f]U`g`z`k`Y`U`f`Y`i`g`]b[`X`]Z`Y`f`Y`b`h`Y`U`fb]b[`UddfcUWX`Y`g`UbX`a`c`X`Y`g`c`Z`]b`g`h`f`i`W]c`b`f`d`f`Y`g`Y`b`h`U`h`]c`b`g`z`d`U]f`c`f`ga`U`"["f`c`i`d`k`c`f`\_`z`]b`X`j`]Xi`U`U`g`g`[`ba`Y`b`h`g`E`hc`d`f`c`j`]X`Y`Yi`h`b`g`]j`Y`UbX`a`c`f`Y`\\c`]g`h`W`c`d`d`c`f`h`b`]h`Y`g`hc`]"gh`Y`b`hc`z`f`Y`U`X`z`g`d`Y`U`\_`UbX`k`f`]h`Y`]b`];`Yfa`Ub`"

H\\]g`Wci`fgY`]g`U`VY`[`]bbYfg!`Yj`Y`Ub[`i`U[`Y`Wci`fgY`"5`gh`XYbHg`k`\\c`\\Uj`Y`\\UX`gca`Y`Yi`dYf]YbW`k`]h`h`Y`Ub[`i`U[`Y`z`Y]h`Y`f`Ug`U`\\Y`f]hU[`Y`Ub[`i`U[`Y`c`f`h`f`c`i`[`\\`d`f`Y`]c`i`g`]b`g`h`f`i`W]cbz`a`i`gh`Z`]"b`h`Y`d`U`W`a`Y`bh`ei`Y`gh`c`b`b`U]fY`Uj`U]UV`Y`Uh`\\h`f`d`g`#A`U`"U`f`h`g`"i`b`g`k`"Y`X`i`"U`i`#`g`h`X`Y`b`h`g`#`W`c`i`f`g`Y`g`#`U`b[`i`U[`Y`!`d`U`W`a`Y`b`h`g`"M`c`i`k`]"`

bchVY`dYfa`]hX`hc`Ybfc`]b`U`Ub[ i U[ Y`Wci fgY`hUh]g`hc`YUgmZcf`mci "Zh]g`cWV fgZ`mci`k`]`VY  
fYei YghX`hc`WUub[ Y`mci f`Ybfc`a`YbH`

5ggYgga Ybh

5ggYgga YbhHUg\_g

| 5ggYgga YbhHUg_   | K Y][ \h | 8i Y'8UHŸ  | Gh XYbh@YUfb]b[<br>Ci hWta Yg'5ggYggYX |
|-------------------|----------|--|--|
| Dcfhzc`]c`        | ( \$i    | Dcfhzc`]c` = 'Xi Y' %&#\$+ 'f( da Ț/<br>Dcfhzc`]c` = 'Xi Y' \$- #\$, 'f( da Ț  | %ž&ž' ž( ž)                            |
| Cb`]bY'E i ]nnYg` | ( \$i    | E i ]n' % 'Xi Y' % ) # \$ * 'f( da Ț/<br>E i ]n' & 'Xi Y' & , # \$ * 'f( da Ț/<br>E i ]n' . 'Xi Y' % - # \$ + 'f( da Ț/<br>E i ]n' ( . 'Xi Y' \$ & # \$ , 'f( da Ț | %ž&ž(                                  |
| GdYU_]b[ `HYgh    | &\$i     | Hi h' % \$) # \$ , '\$- . \$ \$ Ua ' !<br>% \$ \$ Ua / Hi h & / ' ' . \$ * # \$ ,<br>% \$ \$ Ua ' ! \$ ( . \$ \$ da  | %ž&ž'                                  |

5ggYgga Ybh8YHU]`g

5ggYgga Ybh% `Dcfhzc`]c`

8YHU]`g.

Gh XYbthg\Uj Y'+&\ci fg'hc'UhhYa dhYUW'cZhY'cb'jbY'ei ]nnYg'fbi ]nnYg'cdYb': f]XUm\$(. \$da 'VYZcfY'hY  
Xi Y'XUHYE"

Hi fb]hb'gYhb[. 'H\]g'jg'bchiU'Hi fb]hb'Ugg][ ba Ybh

5ggYgga Ybh' . 'GdYU\_]b[ 'HYgh

8YHU]`g.

Gh XYbthg'WcbXi WU'g\cfhX]U'c[ i Y'f)!, 'a ]bgk'bidU]fg'cf'ga U''[ fci dg"

: YYXVUW\_j ]U'a Uf\_]b[ 'fi Vf]WUbX' ]bX]j ]Xi U'Wca a Ybthg"

Hi fb]hb'gYhb[. 'H\]g'jg'bchiU'Hi fb]hb'Ugg][ ba Ybh

5 hYbXUbW F Yei ]fYa Ybhg

5 hYbXUbW cZ@YWh fYg#Hi hc f]U'g ]g'a UbXUhc fm]b h'lg'Wci fgy" h'k ]'VY fYWcfXYX'Uh h'Y'VY[ ]bb]b[ cZ YUWX @YWh fY/ 'Hi hc f]U' i g]b[ 'h'Y '@A G" I bYI W gYX'UVgYbW'Zca 'a c fY h'Ub'&\$i cZ @YWh fYg#Hi hc f]U'g'k ]'fYgi 'h]b' h'Y'Uk UfX'cZU'Z] ]' fUXY" h' @YWh fYg#Hi hc f]U'g' mci 'k ]'UW]j Y'mYb[ U[ Y k ]h'WcfY'Wci fgy'WcfYb'fYb'fYb'UV' ]b[ 'mci 'hc'UhtU]b'7@c'%'&/' " "

7 ci fgY'GWX YXi `Y

[J \]yk WUgg'hja YhUVY](#)

H]a YhUV`Y`

| 8UhY                         | HmdY        | 7cbhYbh  |
|------------------------------|-------------|--|
| K YY_% " %A Um! '( >i bY     | Hcd]W       | 9]bZ0\ fi b[ '5.'; fYYh]b[ gZf Yei YghgZ'5'd\UVYh/ Bi a VYfgZ'7'ch]b[ '7c'ci fgZ |
| K YY_&.'+>i bY!'%%>i bY      | Hcd]W       | 9]bZ0\ fi b[ '6.'7'Uggfcca Z'5ddYUfUbW'Z'6cXmZ : Ua ]mZ'K YU h'YfZ'c f[ ]b       |
| K YY_.'.%>i bY!'%>i bY       | Hcd]W       | ? Ud]hY`%'f#<c'VV]YgZ'GWX'cc'Zi b]j Yfg]mZ'H]a YZ 8U]mF ci h]bYg                 |
|                              | 5ggYgga Ybh | E i ]n'%'f% #*\$'\$(. \$\$da Ł   |
| K YY_('.&%>i bY!'&)>i bY     | Hcd]W       | ? Ud]hY`%'f#<c'VV]YgZ'GWX'cc'Zi b]j Yfg]mZ'H]a YZ 8U]mF ci h]bYg                 |
|                              | 5ggYgga Ybh | E i ]n'%'f% #*\$'\$(. \$\$da Ł   |
| K YY_') .&,'>i bY!'&*>i `m   | Hcd]W       | ? Ud]hY`'&'DcggYgg]cbgZ; ]ZgZ' h]j ]h]h]cbgZ'7'ch]b[ Z @Y]gi fY                  |
|                              | 5ggYgga Ybh | E i ]n'&'f% #*\$'\$(. \$\$da Ł   |
| K YY_*.') '>i `m!'-'>i `m    | Hcd]W       | : `YI ]K YY_   |
| K YY_+'.%&*>i `m!'%*>i `m    | Hcd]W       | ? Ud]hY`'' f#<HU'YbhgZ'D'UbgZ'8i h]YgZ'D\mg]WU' 7cbX]h]cbZ: YY]b[ g              |
|                              | 5ggYgga Ybh | Dc fhZc`]c`='f%&#+'\$(. \$\$da Ł   |
| K YY_'. '%>i `m!'&'>i `m     | Hcd]W       | ? Ud]hY`'' f#<HU'YbhgZ'D'UbgZ'8i h]YgZ'D\mg]WU' 7cbX]h]cbZ: YY]b[                |
|                              | 5ggYgga Ybh | E i ]n'' f% #+'\$(. \$\$da Ł   |
| K YY_-'&*>i `m!' '\$>i `m    | Hcd]W       | ? Ud]hY`'( 'f#<c`]XUmZ'gdYW]U`c'VW]g]cbgZ'ZYY!h]a Y UW]j ]h]Yg                   |
| K YY_%.&'5i [i gh!'*5i [i gh | Hcd]W       | ? Ud]hY`'( 'f#<c`]XUmZ'gdYW]U`c'VW]g]cbgZ'ZYY!h]a Y UW]j ]h]Yg                   |
|                              | 5ggYgga Ybh | E i ]n'( 'f%&#,'\$(. \$\$da Ł  |
|                              | 5ggYgga Ybh | GdYU_]b[ 'HYghf\$)!\$*#\$, Ł<br>Dc fhZc`]c`='fK YY_`%'\$- #,'\$(. \$\$da Ł       |





Gi Va ]gg]cb`cZ5ggYgga YbhiHUg\_g

Hi fb]h]b`Gi Va ]gg]cb

≠mci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UHYa` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiHfci`[`\`Hi`fb]h]b`z`d`YUgY`  
HY`Yd`cbY`9I`HYfbU`Gi`ddcfhcb`-`,`)`"``"``%cf`Ya`Uj`h`Ya`cb`YI`HYfbU`HY`hgi`ddcfh4`i`bgk`"YXi`"Ui`"Gi`ddcfh`  
`lci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`cb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).`\$\$da`cb`k`YY`YbXg`f1`\*)`XUmg`U`mY`Uf2`≠mci`  
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiXi`Y`hc`U`Zji`hk`]h`Hi`fb]h]b`mci`a`UmUdd`mZc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`  
a`i`ghfYhU]b`mci`f`h]W`Yhbi`a`VYf`Zca`9I`HYfbU`Gi`ddcfhU`cb[`k`]h`Ubmc`h`Yf`fY`Yj`UbhXcW`a`Ybhtg`hc`  
]bWi`XY`Ug`Yj`]XYbVW`hc`gi`ddcfhmc`i`f`YI`HYbg]cb`Udd`]W]h]cb`≠mci`Ya`Uj`9I`HYfbU`Gi`ddcfhmc`i`k`j`  
Ui`hca`U]WU`mifYW]j`Y`U`h]W`Yhbi`a`VYf`z`Vi`h]Zmci`HY`Yd`cbY`mci`k`j`bYYX`hc`gdYW]Z]WU`mUg`Zc`f`cbY`  
Hi`fb]h]b`U`gc`dfcj`]XYgi`dXUH`g`cb`h`Y]f`gmghYa`g`hU`h`g`cb`Hk`]HYf`"

;`YbYfU`mz`UggYgga`YbhiUg\_g`a`i`ghVY`gi`Va`]hYX`Y`YWfcb]WU`mj`]U`Y]h`Yf`Hi`fb]h]b`cf`U`A`ccX`Y`  
Ugg][`ba`Ybhi`h`]bghU`bVW`g`k` \YfY`h`lg`]g`bchidcgg]V`Yz`]hk`]`VY`ghU`YX`cb`mci`f`Wci`fgY`g`A`ccX`Y`g]h`k`]h`  
U`HYfbU]h]`Y`gi`Va`]gg]cb`XYhU]g`"

:`cf]bZcfa`Uh]cb`cb`lck`hc`gi`Va`]hUgg][`ba`Ybhtg`cb]bY`j`]U`A`ccX`Y`.`hhdg`#gh`XYbhi`bgk`"YXi`"Ui`Ack`!  
gi`Va`]hUgg][`ba`Ybhta`ccX`Y`"

## 5 WUXYa ]W< cbYgmiUbX`D`U[ ]Uf]ga

D`U[ ]Uf]ga `]g`i`g]b[ `h`Y`k`c`f`X`g`c`f`]X`Y`U`g`c`Z`c`h`Y`f`g`i`U`b`X`d`f`Y`g`Y`b`h]b[ `h`Y`a` `U`g`m`c`i`f`c`k`b`" `#`W`U`b`h`U`\_`Y`a` `U`b`m`  
Z`c`f`a` g`z`Z`c`a` `X`Y`]V`Y`f`U`h`Y` `W`X`Y`U`h]b[ `h`c` `U`W`W`Y`X`Y`b`h`U` `m`i`W`c`d`m]b[ `Z`c`a` `U`g`c`i`f`W` `k` ]h`c`i`h`U`W`\_`b`c`k` `Y`X[ `Y`a` `Y`b`h`

I`B`G`K` `[`f`c`i`d`g`d`U[ ]Uf]ga `]b`h`c` `h`Y` `Z`c` `c`k` ]b[ `W`U`h`Y`[`c`f`]Y`g.

- i bXYfgHUbX'mci f'f][ \hg'UbX'fYgdcbg]V']hYg'Ug'U'gh XYbhUhl BGK
-

## 5 WUXYa ]W=Zcfa Uh]cb

: cf`YggYbh]U`gh XYbh]bZcfa Uh]cb`fY`Uh]b[ `tc.

- fYei Ygh]Zcf`YI H`bg]cb/
- `Uh`gi Va ]gg]cbg`[ i ]XY`]bYg/
- fYj ]Yk `cZa Uf\_g/
- I BGK `<YU`h`UbX`GUZY`midc`]WYg/
- YI Ua ]bUh]cb`dfcW`Xi fYg/
- gdYW]U`W`bg]XYfU]cb`]b`h`Y`Yj YbhcZ]`bYgg`cf`a ]gUXj Ybhi fY/