

# **ARTS2510**

⇒hYfa YX]UhY; Yfa Ub'5

HYfa 'C bY''##'&\$%-

# 7ci fgY<sup>-</sup>Cj Yfj ]Yk

## 'GhJZZ'7cbhJWh'8YhJ]`g'

### '7cbj Ybcfg'

B Ua Y	9a U]`	5j U]`UV]`]lm	@cWUh]cb	D\cbY
8 Y b ]gY '< UbHY`	9		A cfj Yb <sup>·</sup> 6fck b &' (	Ž*%f&Ł'-',) \$)-*

### GWXcc``7cbHJWhi±bZcfa Uh]cb

GWkcc`cZ<iaUb]hJYg'UbX'@Ub[iU[Yg

@c\\U||cb. G\\cc``C\\Z|\\\žA\cfj\Yb'6fck\b'6i]\X]b[\z'@\j\Y``&z'&),

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

D\cbY.'Ž\*%'&'-',)'%\*,%

: UI . 'Ž \* %'&'-' , ) ', +\$)

9a U]`. '<u>\U`4 i bgk "YXi "Ui</u>

## 7ci fgY 8YHJ] g

#### 7 fYX]hDc]bhg \*

### Gi a a UfmcZh\Y'7ci fgY

; fWd\_ WW[SfW9 Wd\_ S` 3 ]g ]XYU`]Zmci `\Uj Y`gi WWggZ ``mUVWca d`]g\YX'h\Y`\bfcXi Wcfm; Yfa Ub'5 'UbX'6 Wci fgYg cfz ]Zmci `\Uj Y`h\Y`Yei ]j U`YbhcZ'U`mYUf`cZ; Yfa Ub``Ub[i U[Y``YUfb]b["'\biWcbgc`]XUhYg`UbX YI hYbXg`mci f`dfYj ]ci g`mUWei ]fYX`cfU``UbX`k f]hhYb'; Yfa Ub``Wca a i b]WUhJcb'g\_]``gžUbX`YI hYbXg`mci f j cWUVi `UfmUbX'[fUa a Uf`Zci bXUhJcb"'H\i gž'h\Y`Wci fgY`YbUV`Yg`mci 'hc 'Wca a i b]WUhY`]b`U`a cfY gdcbhUbYci g`UbX`Y`UVcfUhY`k Um]b`; Yfa Ub"`Nci 'k cf\_'k ]h\`U`fUb[Y`cZUi h\Ybh]W`YUfb]b[ 'a UhYf]U`fZ]WJcbU``UbX`bcb!Z]WJcbU`žcb`WcbhYa dcfUfmUbX`\]ghcf]WJ``hcd]WgŁk\]W\`dfcj ]XYg`mci 'k ]h\`YI hYbg]j Y\_bck`YX[Y`UbX`U`VYhhYf`i bXYfghUbX]b[ 'cZh\Y`gcW]YhJYg`UbX`W`hi fY`cZ; Yfa Ub!gdYU\_]b[ 'Wci bhf]Yg"

#### 7 ci fgY @YUfb]b[ Ci hWca Yg

- %" I bXYfghUbX`UbX`fYgdcbX`]b`; Yfa Ub`hc`h\Y`a U]b`dc]bhg`cZcfU``UbX`k f]hhYb`hYI hg`XYU`]b[`k]h\hcd]\Mg`cZVfcUXYf`gc\MJU``\Wcb\Wfbg`Yb\Wci bhYfYX`]b`h\Y`; Yfa Ub!gdYU\_]b[`\Wca a i b]h]Yg"
- &" DfcXi VW g]a d`Yž'Vc\YfYbhiHYl hg`fcfU``UbX`k f]hHYbŁ`]b`; Yfa Ub`cb`'Wca a cb`hcd]Vg`cf`UfYUg`cZ dYfgcbU``]bHYfYgh'
- ' " 8 YgWf]VY YI dYf]YbWfg UbX Yj Ybhg UbX dfcj ]XY fYUgcbg cf YI d`UbUh]cbg Zcf cd]b]cbg UbX d`Ubg ]b Yfa IIb"
- ("FYZYWicb"YUfb]b['dfcWygg'UbX"YUfb]b['glfUlY[]Yg"
- ) "8YjY`cd`ghfUhY[]Yg`hc`Wcaaib]WUhY`YZZYWhjjY`mik]h\`ch\Yf`aYaVYfg`cZh\Y`[fcid"

## HYUW ]b[ 'GhfUhY[ ]Yg'

H\Y'hYUW\]b['gffUhY[]Yg'cZci f'; Yfa Ub'WUggYg'UfY'VUgYX'cb'h\Y'Wca a i b]Whij Y'UbX'hUg\_!VUgYX UddfcUW\žk\]W\'U]a 'Uh[]j ]b['gh XYbhg'cddcfh b]hjYg'hc'dfUWjWY'h\Y]f'Wca a i b]Whijcb'g\_]``g']b'WcbhYl hg h\UhiUfY'dYfgcbU``mfY'Yj UbhUbX'WcbbYWfYX'hc'Yj YfmXUm']Z/"'H\i gžgh XYbhg``YUfb'U'j YfmUi h\Ybh]Wi gY'cZh\Y'; Yfa Ub'`Ub[i U[Y'Wca V]bYX'k]h\ W'h fU``UbX\\]ghcfJWU`\_bck `YX[Y"'H\Y'`YUfb]b['a UhYf]U``fdf]bhUbX X][]hU`cUbX``YUfb]b['UWjj]hjYg'fY''['"cb']bY'hUg\_gžga U```HUg\_g#dfc'YWg']bg]XY'UbX'ci hg]XY'h\Y'WUggfcca ž ZWfjcbU``UbX'bcb!ZWfjcbU'`hYl hgcdfcj ]XY'ghi XYbhg'k]h\'j Uf]YX'cddcfh b]hjYg'hc'dfUWfJWY'h\Y]f'fYWYdhj Y'UbX dfcXi Wfj Y'g\_]``gž'Ug'k Y``Ug'h\Y]f'j cWUVi `UfmUbX'VUg]W; Yfa Ub'[fUa a Uf"'K Y'YbWci fU[Y'ghi XYbhg'hc Yl dUbX'h\Y]f'fYdYffc]fY'cZgi ]hUVY`Ub[i U[Y'`YUfb]b['gffUhY[]YgžUbX'hc']bXYdYbXYbhmdfUWfJWY'cfffy]gY h\Y]f'; Yfa Ub'g\_]``g'cb'U'fY[i `Uf'VUg]gž']bg]XY'UbX`VYmcbX'h\Y'WUggfcca "'H\Y'`Ub[i U[Y'cZ]bghfi Wf]cb']g dfYXca ]bUbhm; Yfa Ub'fUdUfhZca 'gca Y'Yl d'UbUhjcb'cZ[fUa a UhjWD'ZYUh fYgb'gc'h\Uhghi XYbhg'XYj Y'cd h\Y]f'`]ghYb]b['g\_]``g''-&'Vch\``YWfi fY'UbX'h hcf]U'gz'k Y'UfY'i g]b['X]ZZYfYbh'YUfb]b['UddfcUWXYg'UbX'a cXYg cZ]bghfi Wf]cb'fdfYgYbhUhjcbgz'dU]f'cf'ga U``'[fci d'k cf\_z']bX]j ]Xi U``Ugg][ ba YbhgEhc'dfcj ]XY'Yl hYbg]j Y'UbX a cfY'\c']ghfWcddcfhi b]hjYg'hc'`ghYb'hc'zfgdYU\_'UbX'k f]hY']b'; Yfa Ub''

# 5ggYgga Ybh

fi Vf]WUbX^]bX]j ]Xi U``Wta a Ybhg"

5ggYgga Ybh'(. HYgh

GHJfh'XUHY.

# 5 hm/b X Ub VW F Yei ] fYa Ybhg

 $\hbox{Ghi XYbhg'UfY'ghfcb[`mYbWci fU[YX'hc'UhhYbX'U```WUggYg'UbX'fYj]Yk ``YWhi fY'fYWcfX]b[g''] }$ 

# 7ci fgY'GWXYXi `Y

# <u>J ]Yk "WUgg"hja YHUV"Y</u>

# H]a YHJV`Y

8 UhY	HmdY	7 cbhYbh
K YY_'%'% '! YVfi Ufm!'&( : YVfi Ufm	ÚXic dYV	? Ud]hY`'%'`>WgfWZWgfW.'DYcd`Yž'XfYUagž Zf]YbXg\]dž'\YfcYgž'\Udd]bYgg
		5i ZhU_h/ 'A cXi ``%
K YY_'&.'&) ': YVfi Ufm!'' A UfVX	Hcd]W	<b>? Ud]hY`</b> '%'>WgfWZWgfW.'DYcd`Yž'XfYUa gž Zf]YbXg\]dž'\YfcYgž'\Udd]bYgg
		A cXi `Y'&'!'(
K YY <u>hY</u> 'gž'(miAi dif(MUXii%fig A UfWX	Hcd]W	? Ud]hY``&``LaZ`iWfW`.`` <ck`dycd`y``]jyž \caY`YggbYggžYIhfUcfX]bUfmi\chY`gžmcib['UXi`hgJXi`hg gh]````]j]b['k]h\'h\Y]f'dUfYbhg</ck`dycd`y``]jyž 
		5 i ZhU_hž'A cXi `Y
I	I	I .

		5 i ZhU_hž'A cXi `Y`%/ `&
K YY_''%) '5df]`'!'&% 5df]`	Hcd]W	? Ud]HY``) ``3 ^\ei [^Y\W\d`fe\\[``.``]ZY`cb[ ``YUfb]b[ ž X][ ]HJ``a YX]Už`YUfb]b[ 'g\fU\Y[ ]Yg:/ 'HY\\\b]ei Yg
		GdYU_]b[ 'HYghž'A cXi `''
K YY_`%\$.`&&`5df]``!`&, 5df]`	Hcd]W	bc``YWnifY'/'hihcf]U``f9UghYf`AcbXUm'/'5BN57 8Um'z
K YY_'‱'&- '5df]`'!'% A Um		? Ud]hY``) ``3 ^Wei [^YWW&feW(``.``]ZY`cb[``YUfb]b[ž X][]hU``a YX]Už``YUfb]b[`ghfUhY[]Yg7 'hYW\b]ei Yg A cXi``(ž'HYgh

F Ygci fWYg

DfYgWf]VYX F Ygci fWYg

•

Gi Va ]gg]cb cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb cZ5ggYgga YbhHUg\_g

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

\_Zmci YbWci bhYf'U'dfcV`Ya 'k \Yb'UhYa dhJb[ 'hc'gi Va ]hmci f'Ugg][ ba Ybhh\fci [ \ 'Hi fb]hJbž'd`YUgY
hY`Yd\cbY'9| hYfbU``Gi ddcfhcb'-', ) '' ' ' %cf'Ya U]`'h\Ya 'cb'Y! hYfbU`hY`hgi ddcfh4 i bgk "YXi "Ui '"'Gi ddcfh
\ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY\_XUmg'UbX'-.\$\$Ua '-') .\$\$da 'cb'k YY\_YbXg'fl \*) 'XUmg'U'mYUft'' =Zmci
UfY'i bUV`Y'hc'gi Va ]hmci f'Ugg][ ba YbhXi Y'hc'U'ZUi 'hk ]h\'Hi fb]hJb'mci 'a Um'Udd'mZcf'Ub'Y! hYbg]cbžVi hmci
a i ghfYhU]b'mci f'hJW\_Yhbi a VYf'Zfca '9! hYfbU``Gi ddcfhfU'cb[ 'k ]h\'Ubmch\Yf'fY`Yj UbhXcW a Ybhgt'hc
]bWi XY'Ug'Yj ]XYbW'hc'gi ddcfhmci f'Y! hYbg]cb'Udd`]WUhJcb'' =Zmci 'Ya U]`'9! hYfbU``Gi ddcfhmci 'k ]``

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

D`U[]Uf]ga i]gii g]b[ih\Yik cfXgicfi]XYUgicZch\YfgiUbXidfYgYbh]b[ih\Ya iUgimci fick b"i±iWUbihU\_Yia Ubm Zcfa qžZfca iXYi]VYfUhYiW\YUh|b[ihciUVW]XYbhU`mWcdm]b[iZfca iUiqci fWYik]h\ci hiUW\_bck iYX[Ya Ybh'i

IBGK '[fci dg'd'U[]Uf]ga ']bhc'h\Y'Zc``ck]b[ 'WUhY[cf]Yg.

7 cdm]b[.'i g]b['h\Y'gUa Y'cf'j Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`hYl h'cf']XYU'k]h\ci h'UW\_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf\_g"'H\]g'U`gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfcYWhgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

⇒ Uddfcdf]UhY 'dUfUd\fUg]b[...7\Ub[]b[ 'U'ZYk 'k cfXg'UbX'd\fUgYg'k \]'Y 'a cghmfYhJ]b]b[ 'h\Y'cf][]bU` ghfi Wh fY 'UbX#cf'dfc[fYgg]cb'cZ]XYUg'cZh\Y'cf][]bU'žUbX']bZcfa Uh]cb'k ]h\ci hUW\_bck `YX[Ya Ybh'H\]g'U`gc Udd`]Yg']b'dfYgYbhUh]cbg'k \YfY'gca YcbY'dUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k ]h\ci hWfYX]hUbX'hc d]YW]b[ 'hc[Yh\Yf'ei chYg'UbX'dUfUd\fUgYg']bhc'U'bYk 'k \c`Yžk]h\ci hUddfcdf]UhY'fYZYfYbW]b[ "

7 c``i g]cb. 'k cf\_]b[ 'k ]th 'cth Yfg'Vi hidUgg]b[ 'cZZth Y 'k cf\_'Ug'U'dYfgcb'g']bX]j ]Xi U``k cf\_"'7 c``i g]cb'U`gc ]bWi XYg'dfcj ]X]b[ 'mci f'k cf\_'thc'Ubcth Yf'ghi XYbh'VYZcfY'th Y'Xi Y'XUHYZcf'Zcf'th Y'di fdcgY'cZth Ya

- i bXYfgfUbX mci f'f][\hg'UbX'fYgdcbg]V]`]hJYg'Ug'U'gh XYbhUhl BGK
- VY`Uk UfY`cZd`U[]Uf]ga ž`Wcdmf][\hz'l BGK `Gh XYbh7cXY`cZ7cbXi WhUbX`5VWWdhUV`Y`l gY`cZ I BGK `=\forall H`F Ygci f\W\g`Dc`]\m\m
- VY 'Uk UfY 'cZh\Y 'ghUbXUfXg 'cZVY\Uj ]ci f'Yl dYWYX 'cZYj YfmcbY ']b 'h\Y 'l BGK 'Wca a i b]hm
- `cWUHY 'gYfj ]WYg'UbX `]bZcfa UH]cb'UVci hI BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZh\YgY'UfYUg'k]``VY'ZJa]`]Uf'hc'mci žch\Yfg'k]``VY'bYk"'; U]b]b['U'gc`]X'i bXYfgHJbX]b['cZU``h\YfY`UhYX'UgdYWhg'cZ9@&9'k]``\Y`d'mci 'a U\_Y'h\Y'a cghicZmci f'ghi X]Yg'UhI BGK "'\\hd.##qi V'YWfi |XYg"`]VfUfm'i bqk "YXi "Ui #\`]qY#JVci hY`]qY

# 5 WUXYa ]W = DZcfa Uhjcb

: cf`YggYbhJU``gh XYbh]bZcfa UhJcb`fY`UhJb[ 'hc.

fYei YghgʻZcfʻYl hYbg]cb/ `UhYʻgi Va ]gg]cbgʻ[ i ]XY`]bYg/ fYj ]Yk ʻcZa Uf\_g/ I BGK ʻ< YUʻh\ 'UbXʻGUZYhmdc`]WJYg/