# **IEST6001**

# FYghcfUhjjY'9Wc`c[]Yg.`DYfaUWi`hifY`Df]bWjd`Yg'/`DfUWfjWY



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# 7 ci fgY<sup>·</sup>Cj Yfj ]Yk

## GHJZZ7cbHJWh78YHJ]`g

### 7cbj Ybcfg

BUa Y	9a U]`	5j U]`UV]`]m	@cWUh]cb	D∖cbY
>UWei]`6Yg[fcjY	<u>"VYg[fcjY4 i bgk "YXi "Ui</u>	6miUddc]bha Ybh Xif]b[ Wobgi`HUh]cb`\cifg fH\ifgXUmg`(.'\$ da`-`).'\$`da Ł'`=b dYfgcb`cf`cb`]bY"	H67	Β5

### GWXcc`7cbHJWhrabZcfaUh]cb

GW&cc``cZ<iaUb]h]Yg7'@Ub[iU[Yg

@cWUHjcb. `GW&cc``CZjWYžAcfjYb`6fckb`6i]`X]b[ž@YjY``&ž&),

## 7ci fgY<sup>·</sup>8YHJ]`g

### I b]hg cZ7fYX]h\*\*

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

H\]gʻWci fgYʻk ]```]bhfcXi WYʻZci bXUhjcbU``WcbWfdhgʻcZh\YʻYh,]WgʻUbXʻdf]bWjdʻYgʻcZdYfa UWʻh fYžU fY[YbYfUhj] YʻgmghYa gʻUddfcUW. 'Zci bXYX`]bʻ5i ghfU`]U`UbX`[`cVU``]b`]a dUWf` +b`h.]gʻWci fgYžmci `k ]```[U]b WcbZJXYbWY`]bʻdYfa UW`h fYʻfYghcfUhj] YʻZfUa Yk cf\_gʻUbX`a Yh\cXc`c[]Ygʻ]bʻh\Y`WcbhYI hgʻcZYbj ]fcba YbHU` a UbU[Ya Ybhž`YUXYfg\]dž'UbX`gi ghU]bUV]`]hm'`DYfa UW`h fY`XYg][bʻgYY\_gʻhc`fYVcbbYWidYcd`Y`k]h YVc`c[]WU``dfcWfggYgž]bhYf!fY`Uhjcbg\]dgž'UbX`]bhYfXYdYbXYbWY`cZ`]j ]b[`h\]b[gʻUbX`hc`]bhY[fUhY`h\YgY \_bck`YX[Ygʻhc`hYbX`hc`YVcgmghYa g`]b`k Umgʻh\UhWUfY`Zcf`h\Y`9Ufh\žWUfY`Zcf`dYcd`Yž'UbX`i gY`U`ZU]f`g\UfY cZfYgci fWfg''DYfa UW`h fY`\UgʻUb`]a dcfhUbhfc`Y`hc`d`Um]b`h\Y`fUd]X`hfUbg]hjcb`hc`nYfc`WufVcb`cf`bYh bY[Uhj] Y`WUfVcb`h\fci [\`fYghcfUhj] Y`UbX`fY[YbYfUhj] Y`YVc`c[]WU`žgcWJU`ž'UbX`W`hi fU``dfUWhjWfg''H\Y Vci fgY`k]``\Uj Y`U`ZcW`gʻcb`]a d`Ya Ybhjb[`dYfa UW`h fY`gc`i hjcbgžXYa cbghfUhjb[`\ck`h\Ycfm`YUfbYX Xi f]b[`gYa]bUfg`Udd`]Ygʻhc`fYU``k cfX`gmghYa g'' +b`gi WWfggZ``mWca d`Yhjb[`h\]gʻWci fgYžmci `k]``XYj Y`cd Udd`]YX`g\_]``gʻhc`XYg][b`UbX`]a d`Ya Ybhi fVUb#gi Vi fVUb'dYfa UW``h fY`gc`i hjcbg`UbX`mci `k]``YUfb`U dYfa UW``h fY`XYg][b`WfhjZWUhY"

### 7cifgY'@YUfb]b['CiHWcaYg

- %" 9I d`U]b`YWc`c[]WU``UbX`gcWJU``Wca dcbYbhg`cZdYfa UWi`hi fY
- &" =XYbhjZm\ck `dYfa UW `h fY`Yh ]Wg`UbX`df]bWjd`Yg`]bZcfa `XYg][ b`Zcf`fYWcbbYWjb[ `\i a Ubg`k ]h #Ug "bUh fY"`k \]`Y`dfcj ]X]b[ `UVi bXUbW
- ' " 8 Ya cbglfUlhY h, Y Z bXUa YbhU`g`cZYWcgmghYa `ghfi Wi fY`UbX Z bWjcb
- (" +bHY[fUHY'H\Y`\_Ymdf]bW]d`Yg`cZkUHYfž`gc]`ž`W]aUHYž'HYYgž'd`Ubhg`UbX`gcW]U``dYfaUW``hifY
- ) " 5dd`mdYfa UW `h fY`XYg][ b`a Yh\cXc`c[ mhc`Ybj ]fcba YbhUbX`gcW]Yhng]h Uhjcbg`UbX`gYhjb[ g

### HYUW ]b[ GhfUhy[ ]Yg

HYUWX]b[ 'GHfUHY[]Yg'Zcf'=9GH\*\$\$%'Yb[U[Y'Hk c'Zcfa Uhg.

%" ŧð! WUgg gYa ]bUfg ]b dYfa UW `h fY XYg][ b `\Y`d mci `XYj Y`cd Ub i bXYfgHJbX]b[ `cZdYfa UW `h fY Yh ]Wg UbX`df]bW]d`Yg"'? Ymh\YcfYh]WJ``WcbWYdhg fY[ UfX]b[ `k UhYfžgc]`žW]a UhYž'hfYYgžd`UbhgžgYYXgžUbX`gcW]Yhm U]a YX`UhXYj Y`cd]b[ `\_bck `YX[ Y`cZbUhi fU``dUhhYfbg`k ]```]bZcfa `XYg][ b"'? Ymh\YcfYh]WJ``XYg][ b WcbWYdhg UfY Wci d`YX`k ]h. `YI Ua d`Yg`cZdYfa UW `h fY`]b`UWn]cb"

&"'FYgYUfW!gYfj]WY!'YUfb]b['Z]YX'ghiXmgYa]bUfg']bHcXiWY'mci'hc'jUf]cig'dYfaUW'hifY'g]Hyg']bWiX]b[ gaU```ifVUb'dfcdYfh]YgžgiVifVUb'g]HygžUbX'Wcaaib]mUbX'ifVUb'ZUfa'gWU'Y'g]Hyg''Nci'k]``VY'YIdYWYX hc'dUfh]W]dUHY']b'dfUW]WU``YIdYf]YbW'Ug'dUfhcZUb'YbYf[mYIW\Ub[Y'hc'WcadYbgUHY``UbX'W ghcX]Ubg'Zcf h\Y]f'h]aY''H\Y'Z]Y`X'WcadcbYbh]g'XYg][bYX'hc'Udd`mUbX'Vi]`X'idcb'h\Y'h\YcfmUbX'WcbWYdhg'WcjYfYX Xif]b['h\Y']b!WUgg'WcadcbYbhcZh\Y'WcifgY"

H\]g`]g`bchU`Hi fb]hjb`Ugg][ ba Ybh

# 5hhYbXUbWY FYei]fYa Ybhg

Ghi XYbhgʻUfYʻghfcb[`mYbWci fU[YX`hcʻUhhYbX`U```WUggYgʻUbX`fYj]Yk ``YWhi fY`fYWcfX]b[g"

# 7 ci fgY GWX YXi `Y

<u>J]Yk WUgg'ha YHUV`Y</u>

### FYgci fWg

### DfYgWf]VYX F Ygci fWfg

Mci f'\_YmfYUX]b[ g'UbX'ch\Yf'a UhYf]U'g'k ]``VY'Uj U]`UV'Y'j ]U'mci f'A ccX`Y'g]hY"

#### FYWca a YbXYX FYgci fWYg

Mci 'UfY'YI dYWYX'hc'a U\_Y'[ccX'i gY'cZh\Y'fYUX]b[g'dfcj]XYX'Zcf'h\Y'Wci fgYž'UbX'hc'fYUX'VYmcbX'h\cgY a UhYf]U`g'Zcf'mci f'Ugg][ba Ybhg'''=bXYdYbXYbhfYgYUfV\']g'YI dYWYX'''H\Y'Zc``ck]b['fYgci fWYg'UfY'Uj U]`UV`Y Zfca 'h\Y'I BGK '@]VfUfmiUbX'UfY'fYWca a YbXYX.

<u>9Uff\i gYfg'; i ]XY'hc DYfa UW h fY</u>fcb'cfXYfžg\ci `X'VY']b'l BGK ``]VfUfmg\cfhm'Ł

FcgYa UfmA cffck

<YdVi fbžJ ]\\".`A Y``]cXcfU`Di V`]g\]b[ "`GY\\bX`9X]h]cb"`&\$%)

<u>DYfa UW `hi fY`.'df]bW]d`Yg'/ 'dUh\k Umg'VYmcbX'gi gHU]bUV]`]m</u>

8Uj]X'<c`a[fYb'

<YdVi fbžJ]W<sup>\*</sup>. <c`a [fYb<sup>\*</sup>8Yg][b<sup>\*</sup>GYfj]W<sup>\*</sup>gž<sup>\*</sup>&\$\$&

DYfa UW `h fY`. 'U'XYg][ bYfgfia Ubi U`

6"`7"`Ac``]gcb'/5bXfYk '>YYj Yg'%-)\*!

HmU`[iažB"G"K"`.HU[Uf]DiV`]WUh]cbgž%,,

DYfa UW `hi fY cbY'. U'dYfYbb]U`'U[ f]W `hi fY Zcf'\i a Ub'gYhiYa Ybhg

6"'7"'A c``]gcb'/8Uj]X'<c`a [fYb

HmU`[iažBGK ... HU[Uf] DiV`]WUh]cbgž%, +

DYfa UW `h fY hk c`. dfUWJWU`XYg][ b Zcf hck b UbX Wci bhfm]b dYfa UbYbhU[ f]W `h fY

6"`7"`A c``]gcb

GhUb`Ymž`HUg"`. `HU[ Uf]ž`% +-

<u>FYhfcGiVifV]U``h\Y`Xckbg\]ZhYffgi[i]XY`hc`U`fYg]`]YbhZhifY</u>

<c`a [fYbž'8Uj]X"

# 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 YbhN fci [ \ 'Hi fb]hjbžd'YUgY hY'Yd\cbY'9I hYfbU'`Gi ddcfhcb'-', ) '' ' '%cf'Ya U]`'h\Ya 'cb'YI 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'mYUfŁ'' Zmci UfY'i bUV'Y'hc'gi Va ]hmci f'Ugg][ ba YbhXi Y'hc'U'ZJi `hk ]h\'Hi fb]hjb'mci 'a UmUdd`mZcf'Ub'YI hYbg]cbžVi hmci a i ghfYhU]b'mci f'hjW\_Yhbi a VYf'Zfca '9I hYfbU'`Gi ddcfhfU'cb[ 'k ]h\ 'Ubmch\Yf'fY'Yj UbhXcW a YbhgŁhc ]bWi XY'Ug'Yj ]XYbWY hc'gi ddcfhmci f'YI hYbg]cb'Udd`]WUh]cb'' Zmci 'Ya U]`'9I hYfbU'`Gi ddcfhimci 'k ]`` Ui hca UhjWU'`mfYWY]j Y'U'hjW\_Yhbi a VYfžVi h]Zmci 'hY`Yd\cbY'mci 'k ]``bYYX'hc'gdYWJZWU``mUg\_'Zcf'cbY" Hi fb]hjb'U`gc'dfcj ]XYg'i dXUhYg'cb'h\Y]f'gmghYa 'gfUh'g'cb'Hk ]hYf"

; YbYfU``mž'UggYgga YbhHUg\_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 YbH'`=b`]bgHUbWfg`k \YfY`H\]g`]g`bchdcgg]V`Yž`]hk ]```VY`gHUHYX`cb`mci f`Wci fgY**'**g`A ccX`Y`g]HY`k ]H\ U`HYfbUh]j Y`gi Va ]gg]cb`XYHU]`g"

: cf`]bZcfa Uh]cb`cb`\ck `hc`gi Va ]hUgg][ ba Ybhg`cb`]bY`j ]U`A ccX`Y.`\hhdg.##gh XYbh'i bgk "YXi "Ui #\ck! gi Va ]hUgg][ ba Ybha ccX`Y

# 5WUXYa ]W<cbYghmUbX<sup>\*</sup>D<sup>\*</sup>U[ ]Uf]ga

D`U[]Uf]ga `]g`i g]b[`h\Y`k cfXg`cf`]XYUg`cZch\Yfg`UbX`dfYgYbh]b[`h\Ya `Ug`mci f`ck b"`=hWUb`hU\_Y`a Ubm Zcfa gžZca `XY`]VYfUhY`W\YUh]b[`hc`UWW]XYbhU``mWcdm]b[`Zca `U`gci fWY`k]h\ci hUW\_bck `YX[Ya Ybh'

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

**7 cdm]b**[.1 g]b['th Y'gUa Y'cf'j Yfmig]a ]`Uf'k cfXg'hc'th Y'cf][]bU`'hYI hcf']XYU'k ]h\ci hUW\_bck 'YX[]b['th Y gci fW'cf'i g]b['ei chUh]cb'a Uf\_g"'H\]g']bWi XYg'Wcdm]b['a UhYf]U`gž']XYUg'cf'WcbW'dhg'Zfca 'U'Vcc\_ž'Ufh]WYž fYdcfhicf'ch\Yf'k f]hhyb'XcW a Ybhž'dfYgYbhUh]cbž'Wca dcg]h]cbž'Ufhk cf\_ž'XYg][bž'XfUk]b[ž'W]fW ]hfmž'Wca di hYf dfc[fUa 'cf'gcZtk UfYž'k YVg]hYž']bhYfbYhž'ch\Yf'Y'YWfcb]WfYgci fWFžcf'Ubch\Yf'dYfgcbfig'Ugg][ ba Ybhk]h\ci h Uddfcdf]UhY'UW\_bck 'YX[ Ya Ybh'

#### ₽Uddfcdf]UHY`dUfUd\fUg]b[.`

5₩UXYa]W≢bZcfaUh]cb