# DYdUfh a Ybh cZ H]ghcfm UbX Pc`]h]WU` SW]YbWY Cc``Y[Y cZ Afhg UbX SW]YbWYg

## FUW i`hm

 $\label{eq:constraint} \begin{array}{l} \textbf{Chid} \ \textbf{Yb} \ \textbf{7U}\ \textbf{g} (1-, 3). \ I \ b \ \textbf{j} \ \textbf{Yg} \ \textbf{hm} Dfc \ \textbf{Z}\ \textbf{ggcf} \ c \ \textbf{Z} < \ \textbf{ggcfm} \ \textbf{b} \ \textbf{X} \ \textbf{S} \ \textbf{Yd} \ \textbf{U}\ \textbf{f}. \ 6.5., \ \textbf{K} \ \ \textbf{Ydcb} \ \textbf{7c}\ \ \textbf{Y} \ \textbf{A} \ .5. \ \textbf{U} \ \textbf{X} \ \textbf{X} \ \textbf{M} \ \textbf{S} \ \textbf{M} \ \textbf{S} \ \textbf{M} \ \textbf{M} \ \textbf{S} \ \textbf{S$ 

8 U ]X? Yh 6Uhg (200(). 5 gg]ghbhDfcZggcf cZ< ]ghcfm6.5., I b]cb I b]j Yfghm/A.5., Cci h k Yghfb 6UdhghH Yc- `c[]W GYa ]bUfm/D .8., ? Ubglg GhHY I b]j Yfghm

3 3 3 4 5., K Yehr ? Yohi WmI b] Yfglm/D\.8., I b]

## j YfglmcZA Ya d∖]g

 $\label{eq:K.HMffm@JbXYm(1-, *). DfcZyggcfcZ< ]gfcfm6.5., HM Lg5 & A I b]j Yfglm/A.5., I b]j YfglmcZB Yk Cf`YLbg/D\.8., HM Lg7\f]gf]Lb I b]j Yfglm/5XX]ljcbU gli XmCci l\k YgMfb 6Ldl]ghH\Yc`c[]WCG/a ]bUfm$ 

8 Uj ]XH\ ca Ug<br/>(1--(). DfcZyggcf cZ< ]gfcfm6.G, H\YC\]c GHYI b]j Yfglm<br/>/A.G, I b]j YfglmcZA ]W][Ub/D\.8., H\YC\]c GHYI b]j Yfglm

## Ciff]Wi`ia

H\Y8YdUfha YbhcZ< ]ghcfmLbXDc`]HW GWbWcZ2fgWi fgYgh\UhUYXYg[ bYXhc a YhhCh W'h fU UbXdfcZyg

1. <=G101, 102, 2()

#### 212 H YI b]hXGHhygZfca 1877 (3)

5 gi fjYmcZI b]hYX GHAng Ya d\Ug]n]b[ bYk gcVJU UbX]bXi ghf]U dfcVYa g h\Yf]gYcZdfc[fYgg]j]ga, 5 a Yf]WAğ Ya Yf[YbWUgUk cf`X dck Yf, K cf`XKUf =, dcghkUf fYUMJcbUbXh\YBYk 8YU, K cf`XKUf =, UbXWbhYa dcfUfm 5 a Yf]VU

#### 245 < ]gtcfmLbX< ]gtcf]Ubg(3)

5 b ]blfcXi Wjcb hc h\YbUi fYcZ\]ghcf]W fYgYUW UbXhc j U]ci ggWcc`gUbXd\]`cgcd\]YgcZ\]ghcfmH\]gWi fgY ]gbcfa U`mH\_Yb Xi f]b[\_cbYlygcd\ca cfYmYU.

## 300 5a Yf]Wb 7i fW < ]ghtm(3)

FYM/dfcW/WYX]h 7<F 300 FY][]ci gUbXWi fWXYj Ycda Ybhg]b5a Yf]W/Zfca h\YDi f]hLbghc h\YdfYgYbh

## 301. 5bV/Mbh< ]gtcfm(3)

#### DfYfYei ]g]hY. < =G101.

A YX]hhffUbYUb-VUgYX VJJ ]`]nUhcb cZh Y UbVJYbhk cf`X. 9a d\Ug]g k ]`` VY []j Yb hc h\Y B YUF 9Ugh; fYYVY, UbX Fca Y.

#### 305 < ]ghtfmcZ7 f]ghtb]hm(3)

DfYfYei ]g]hY. < =G 101 UbX 102. FYVJdfcW/ WYX]h7 < F 30). 5 gi fj YmcZ7 f]g]Ub]hmZfca 7 f]ghlc h\YdfYgYbh

#### 311. 9b[`UbXhc 1714(3)

Cf][]bUbX[fckh\cZh\Y9b[`]g\dYcd`YZfcaUbV]MbhhaYghch\Y1,h\Wbhifm9ad\Ugjg]gd`UWXcbWbghhihjcbUXjjYcdaYbhg

312 A cXYfb 6f]lUb UbXh Y9a d]fY(3)

A Ub WffYblgcZh ci [\h,Wbg]li l]cbU WUb[Yg h\Yf]gYcZdUf`]Ua Ybh UbXZcfY][b dc`]Wn

#### 315 < ]ghtfmlbX; cj Yfba YbhcZHYbbYggYY(3) FYYJdfcW/WYX]hDG731). H\Ydc`]HW, WbgHi HcbU, gcVJU, UbXYWbca ]W ]ghtfmZfca 1+\*hchYdfYgYbh

#### 82 316 FYbUggUbWUbXFYZcfa Ulcb (3)

FYVJdfcW/WYXJh7<F31\*. BcfhYfbUbXGcihYfbUjggUbW/FYZcfaUjcb,7cibhYf-fYZcfaUjcb,UbXDfchYgfUbjga.

#### 317. H Y: fYbW FYj c'i ljcb UbXBUdc'Ycb = (3)

5 głi XmcZh YVU<u>V</u>[fci bX, dYfgcbU]]]Yg UbXYj YbłgcZh YFYj c`i l]cb, h YB Udc`Ycb]WK Ufg UbXh Y7cb[fYggcZ J]YbbU

#### 320 @U]b5aYf]Wb<]ghtfm(3)

5 b ]bhfcXi Wijcb hc h·Y \]ghcfmcZ@Uijb 5 a Yf]WVY[ ]bb]b[ k ]h dfY-W^cb]U UbXW^cb]U \]ghcfmVi hYa d\Ugjn]b[ h·YdYf]cXg]bW]bXYdYbXYbW.

## 322. Hk Ybh Yh 7Ybh fm9i fcdY(3)

DfYfYei  g hY. < =G102.				
H(Y)ghcfmcZh(YW)bca ]W(h(Y)]g	Y∖]‡	\]-	Y	3 ∖]gh

## 330 Di V`]W5Xa ]b]gffU]cbUbXDc`]WnAU\_]b[ (3)

5 głi XmcZh YÎ Zci fh VfUbWÏ cZ[ cj Yfba YbhcZh YI b]hXQUhýgk ]h UZcWgcb h YXYj Ycda YbhcZdi V]Wdc`]WhUX ]hgUXa ]b]gfUh]cb. H YfYUh]cbg\]d Ua cb[ h YY] YWh]j Y, `Y[ ]g`Uh]j Y, UbX 1 X]MU VfUbWYg]gUgc Ya d\Ug]nYX.

## 332. 7 ca dUfUłj YDc`]l]W/ Gnghľa g(3)

5 b UbUnglgcZh Ydf]a Umdc`]h]W gngha gh UhZcfa h YVUglgcZa cXYfb bUhcb-ghUng bUa Ym`]VYfU XYa cWUhW gngha g Wa a i b]ghUbX dcghWa a i b]ghgngha g UbX h YXYj Ycd]b[ gngha g cZh YdcghW`cb]U`]bhfbUhcbU Wa a i b]hmH ]g Wi fgYXcYgbchXYU k ]h dUfhW`Uf [ cj Yfba YbHU gfi Wi fYg

## 333 =bhhfbUljcbU Cf[Ub]nUjcbgUbX@Uk (3)

=bhfbUlcbU cf[Ub]nUlcbg Vch [cj Yfba YbIU UbX bcb-[cj Yfba YbIU, Ug h Ym]bhffUMik ]h ]bhfbUlcbU Wa a i b]hm=bhfbUlcbU `Uk UbX]lgXYj Ycda YbhUfYYI Ua ]bYX

## 340 H\Y>iX]VJU DfcWgg

 $\label{eq:hamiltonian} H \ YbUhi\ fYcZ`Uk, h \ Ydf]bVhdU Uhitfg]bh \ Y`Y[U gnghYa Í dc`]W, `Uk mYfg UbX `t \ X[Ygí UbX h \ Y]ffc`Yg]bh \ YgnghYa [Ugk Y``Ugh \ YUV]`]hmcZWi fhghc a U_YgcVJU dc`]Win$ 

## 342 HAYI b]hXGLhig7cb[fYgg(3)

 $H Yfc YcZ7cb[fYgg]b 5a Yf]Wb [cj Yfba Ybh]bWi X]b[ Wb[fYgg]cbU YYWgcbg fYdfYgYbHJcb, h Ycf[Ub]nUJcb cZ7cb[fYgg UbX dc`]Wha U_]b[ UbX ]hg]bHYfUWgcb k ]h ch Yfggi W Ug h YdfYgJXYbh ]bhYfYgh[fci dg h Ya YX]U UbX dc`]HW dUfJYg$ 

## 344. H\Y5a Yf]Wb DfYg|XYbWh(3)

5 głi XmcZh YWobgłlii HobU, ]bgłlii HobU UbX \]ghcf]W XYj Yoda YohcZh YdfYg|XYbWnk ]h, gdWJU UhMohob hoh Y gYYWjob, fo`Yg UbX dok YfgoZh YdfYg|XYbhUbX \]g]bh/fUMjob k ]h, oh, Yf do`]HW UMiofg

## 355 Dc`]l]WgcZh Y8Yj Ycd]b[ ChUhg(3)

8 Yj Y cd]b[ głthig fYZłffYX hc Ug h\YH\]fX (: ci fh\) K cf`X, ]bWi X]b[ 6Ub[ `UXYg\, a cghcZ5Zf]Wi UbX dUflg cZC9 5 gU VY[ ]bb]b[ k ]h\ h\YbX cZh YW`cb]U dYf]cX

#### 360 Dc`]l]WgcZ=g'la (3)

 $\label{eq:hydro} H Y dc`]HWg'cZ=g'La ]WWY']YZg gi W Lg'HUX]HcbU']ga , fYZcfa ]ga , UbX gYW'Lf']ga , UbX h Y]f dc`]HW ]bÛi YbW cb [cj Yfba Ybhgh fci [ \ci hh Y=g'La ]Wk cf`XUbXh Y]f fY'LHcbg\]d k ]h =g'UY'.$ 

## 365 =bhfbUljcbU GYWf]hm(3)

ClfUh(]Wh\Ycfmhhffcf]ga, Wibhhfhffcf]ga, a]`]Hfm]bhhfjYbh]cb, UbX]bhY`][YbW]bh\YWbhhadcfUmkcf`X

## 400 8 Ya cWiUjnUjcb UbX < i a Ub F][ $\bg(3)$

5 ghi XmcZh Yh YcfYhW i bXYfd]bb]b[gcZXYa cWUMhUbXh Ycf][]bgUbX XYj Ycda YbhcZ\i a Ub f][\hg]b h Y k cf XhcXUm

#### 411. 5 a Yf]Wb: cfY][b Dc`]Wh(3)

DfYfYei ]g]hY. < =G.211 cf 212. FYV]dfcWJ VfYX]h < =G(11. GYY < =G(11. Zcf XYgVf)]dh]cb.

#### 414 =blfbUjcbU FYUjcbgH Ycfm(3)

HUX]ljcbU UbXa cXYfb ]bhYfbUjcbU fYUjcbgh Ycf]Yggi W UgfYU]ga, ]XYU]ga, UbX dcgha cXYfb]ga.

## 415 7cbgłli ljcbU @Uk =(3)

5 głi XmcZh Y Wogłlii łljcbU głfi Wa fYcZ[cj Yfba YbhUgXYj YcdYX Vmh YI.G Gi dfYa Y7ci fhfYUłlb[hc ZXXYU-]ga, h Y gYdUfUłlcb cZdck Yfg h Y i f]gX]Wjcb cZh Y Wa fhg h Y HI ]b[dck Yf, h Y k Ufdck Yf, UbX h Y Wa a YfW dck Yf.

## 416 7cbg/jhi ljcbU @Uk =(3)

5 ghi XmcZh Y Wobghli hlcbU XcWf]bYgfY`Uhb[ hc Wj]`f][\hgUbX VJj]``]VYfh}Yggi W Ug: ]fgh5 a YbXa YbhZYYXca g Yei U dfchYMjcb, df]j UMnUbX f][\hgcZh YUWVgYX.

## 425 Dc`]l]VgUbXFY][]cb(3)

5 b Yl La ]bLijcb cZh Y]bhifUMijcb Vilk Yib dc`]lijWgUbX fY][]cb ]b Xca YgijWLbX]bhifbLijcbU dc`]lijWg

## 431. Dc`]l}W GMMbW=bhfbg ]d (fYdYUUV Yi d hc 6)

 $=bX[j]XiU^{M}XYg[bYXgh Xmk^]W dYfa]lgh Yi ddYf-`YjY gh XYbhlc `YUfbh fci [\ dUfh]VldUhcb]bUMiU [cjYfb$ a YbhgYh]b[g Y]h Yf Xca YghWcf]bhhfbUhcbU. 7`cgYWbgi`hUhcbk]h YXYdUfha Ybh]bh YXYg[b cZh]ggh Xm $k]``VYbYWggUmlc WbZcfahcIb]jYfg|mgHbXUfXgfY[UfX]b[]bhhfbg\]dg$ 

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