

Ù N}ýb}ztztÚ

pRb{ \_x

(pRz=b{>)



z«mß pR>

(Ûcp{zA)

1

NùÆ\_}ÁÄ} omz Q{m{^} u}BcN}m} Õÿp{D{  
q}e d}D=QØ \_p{v p{l pæk³QÛ^ kDk>  
l {x{qANVdN{dI {l u}Ôde{^³AbNz  
tÔQ}çl {l \_m{z pzi = m}p{Qm}Úûp{z

2

\_tÙ dQÛÀN{ç b{ o|øÛl {N{zâ N}ù  
ñ\_}B p{l u} dÁdNpnl {Û{qmN³z>  
As} ]zÙ Êap{bpt pRp{lÛu}d{=  
pÛN}zm^\_QV{ex{# {= b{b{m

3

\_tÚ Ñ\_}B Nâ{p{e z{m{NÀ {N}c}d{w\_¾  
m{m}×zÕ úAm{p{d{T{m³/4m}Vm}VzÚ b{ÁÚ  
pR|o³N{kp{l zPd³<zÚÚa}p{D T{ç  
N{ }p{zÛ^l ò Vd{N{ z{d{m{z=ñ

4

Û\_}ÚzdÛ dk{ b{ \_}i ø\_}np{x}d}ñ  
i p{©\_ {zBN{qhp{l |= üm{ zÚ dQÿp{Dp+  
z Û\_Ü³ N{ZVN{z p²> N{Õ\_}A}l {\_tÙ



9

$p\{Q\} p\{Q\} d\{b\} zpd\{q\} Ad\{N\} o\{3/4\} \{a\} \_ \} \beta =$   
 $p\}p\{q\} \{E\} \{= db\} p\{c\{m\} T\} \_ N\{p\} zQ\{Q\}$   
 $Q\{m\} \{0\} c\} d\{x\} \{z\} m\{T\} \{ \} d\{0\} d\{p\} \{i\} \{b\} \{ \} o\} >$   
 $\mu\{0\} z\{U\} \{d\} \{d\} \{k\} Q\{P\} \{k\} p\{d\} \{i\} o\} |N\} >$

10

$\_ \} = T\} p\{U\} = b\{p\} zQ\{d\} \_ \{Q\} m\} p\{N\} z\{i\} \{0\}$   
 $p\{p\} \{U\} z\{d\} \{0\} p\{0\} \_ \{a\} Q\{i\} \{m\} \{U\} \{U\} \_ \{W\} | \{ \} p\{+$   
 $A\{q\} i\} \{0\} N\{z\} p\{z\} b\{q\} \{U\} \{ \} l \{q\} \{3/4\} z\{U\} \{d\} \{d\} =$   
 $z\{b\} \{U\} \{f\} \{i\} \{U\} \{ \} l \{ \} z\{ \} -\{b\} \{ \} \{= \} \{0\} \{U\} \{ \} m\{ \} \{ \} \{ \}$

11

$N\{d\} \{= \} l \{T\} \{E\} \{U\} \{k\} p\{i\} p\{z\} p\{c\} \{C\} \{= \} \{0\} p\{p\} \{0\} \{U\} =$   
 $\_ \{T\} \{C\} \{Y\} \_ \} \beta \_ \{U\} \{p\} \{z\} \{k\} Q\{Q\} \{m\} \{ \} \{ \} p\{ \} \{d\} \{U\} \{1/2\} \} \{A\} >$   
 $A\ N\{0\} |u\} b\{z\} N\{z\} n\{l\} \{T\} \{C\} \{b\} \{f\} \{c\} \{ \} \{p\} \{d\} \{ \}$   
 $z\{= \} z\{ \} \{U\} \{d\} \{k\} \{ \} \{k\} p\{ \} \{3/4\} m\} V\{z\} =\{u\} > z\{u\} l \{ \} >$

12

$A\{z\} -\{T\} \{C\} \{z\} \{B\} \{U\} \{ \} l \{z\} \{0\} p\{p\} \{ \} = \_ \{S\} \{p\} \{ \} \{0\} \{S\} \{U\} \{d\} \{h\} =$   
 $p\{0\} \{ \} z\{ \} =\{u\} = m\{R\} \{ \} z\{ \} z\{b\} \{ \} m\{S\} \{A\} \_ \{ \} p\{0\} o\} |z\{ \}$   
 $N\} o\{N\} o\{k\} p\{i\} \{k\} p\{ \} \{ \} l \{z\} \{U\} \{z\} =\{l\} \{0\} Q\{p\} \{ \} \{U\}$   
 $\mu\{0\} z\{ \} p\{U\} \{N\} \{u\} \{A\} \{m\} \{m\} \{ \} V\{= \} p\{ \} \{Y\} \{E\} \_ \{3/4\} j\} z\{0\} p\{ \} \{z\} p\{+$

13

p{A\_}p{T:CY^ NaI {DB\_QYl }d}d{m^e=,  
z=bq{ p{ \_bd{ Vnb{U^zU^ U^3U^ }el {p+;  
PpQ>PpQ>úOmz eb{ d{UzUQ}t l {U{  
x^>x^>emR el {>U^1/2 }= T^k{VU

14

@U{q{S= z m{ epd{N{ tBbc {Ud{UPô  
m{S/2 }âz q{AN{ TN{ } p{ Q{S}d}ô>  
Nd} b{ }U \_am{zT{o| b{ Q\_ %SSUO>O=  
bS|OQ}d}= za{zm{ m{+z^ n{z }p{f}d+

15

m{QT}C1 } p{U N{Bp{UexU p{ {O{m}  
b{÷UN}Q} \_QYk{ c{ }>O{ p{ }O{nzU  
l {d{q}Up{= p{z{ m{ \_m}= N{D p{ }z{U \_L{  
i m{ p{z{Om{ {m{cd} Q^ep{zU o{S^1/2}

16

\_B1 }U{ D{ N{r gnø î U{øN}m}d{S^  
U{ tO{Q{nd{zbp{c^ o^T{d^ }el {p{ }d{  
zbU> em^4 Az^ z^m{ xU {p{ }m{z U p{ }n=  
N{ç \_Q{ }E b{YV n{z^Q{ m{ø1 {I p^D{m{

17

\_}B p{ }u}m{Uq{ \_p{d^z{ep{ }u}c{ }p{ }m{O}

p\*U \_Uckqp{zmQ} u}d{p} d}p{N{Z>  
d{x}{U}3/4<e Eap{z{N{ }exI } z=QI }l {  
U}E o U{k pI op{O>N{ z}d{m{Ea}TAE

18

Ud{O}f}d{zmc^ \_gnb}U{ o>N}dd}p^2  
DB l }Um^ ] uOmp{Tn>tOQ}p^zpiI  
d{d}l }zU \_Up{m{ a{d{ex}^\* } p{pN=  
p{cU}q}Up{>Dd{Bp{k{p{q}EoD}m{f}I^>

19

N}B \_tU d}d{Tm{c}^k{N{N{Y} p{z}^O}d{  
\_3/4^ @ \_a{U} {m{I} E O}m{ p{U} i in{  
m{ }= UxU}z{U}enozp{ o{U}f}b{oum}=  
k{N}C}b{m{ }{om{ }\_}= k{^i} p{A}QVzU

20

\_u}U}N}m{d}QVp{b^2}m}Bt\_<p}d{p{E  
mp{^O}xN{Y} E{i}z\_ m{ }= \_3/4 }p{ }b}l {QTC>;  
@d{x}m{ E}d{ }{nl } \_{= d}dn>qxU{ }\_}B=;  
m{ }z}m^3} k{pI } v nE^>e<im{ } QAm{ }l {

21

nE= b{S}B z m{ N}eq{ N}z}m{m{ }^2  
m}om{^O} \_{Eap{ }p{N{w}>N{Q} q}Ad{N}C}p+  
VQ}Bm{^U}z}bcN{z}m{ = Q}Q} }|E}l {T^3}m}BU>

u}m} # Vnnpp{ l}z^ l} zú p}p}

22

@p©0òQ Q^T{ {m}= q}E N}d+ùxp{ }^>  
û^k^ }>emQ^dI { } ðmQ^3/i o|N}>  
\_}β p{ }u}bU Dð \_zp{ } p{ }dI zú t b}>  
u½ Áð}ð Êl {zx Tmz=ûp{ }öÏ\_ }ð

23

D\_Qq}Úø^ Ê{ }p{ }e zP{ }p{ }i ÕYl { }m l " l { }u½  
N}nx= N{ }k{ }z mkÀ zmb\_ { }zmb\_ l l  
q{ }f} Ñ zVn dI { }d> u}βQ{ } N\_ U N}>  
Ê\_ { }Úb}Ú\_ { }Ná p{ }e kp} Æ{ }p{ }q{ }pÚp{ }Ú\_ +

24

f}Ë^T}Çl © zpdp{ }\_ { }N N z^ aâçôdê  
m\ }m^0 Æz i ök{ }W p{ }N{nQ} p{ }T^ }Ú>  
\_β l { }Úzd Ê zmc^ \_gn q}Úp{ }Vp{ }©×pd}d}>  
z=z\_ áÚÊ N{ }z l { }bd N l " z=u} bq} ïm}>

25

\_ \$}= b&{ Êaç { }øbq}nx{ }= m}Vc}ñ=  
Q\_ }β z bÚ> gn p{ }øNñ= N}p{ }N{ }β zÚ nQ>  
i m^4}d { }z kQ{ }f}zÚ t u}β b{ }l { }D{  
\_ áË^ k Ñ= p{ }0ø p{ }z l © pÚ p{ }Ú qÆo^mÚ





N}mU= l d{UVi ocd} z\_k f^z p^3et}bU

31

f}f}Up d{bI {dNc}N%obU}p{p{O}d+  
z«m^b} p{d{zm{z|me Uoq}o|= oq}o|=  
zB:Ok^ z Tnc go{zBAC}= Q}= Q{d}=  
qf>e^U> x^-\_o p{bp>N}Dp{A^ p{Np+

32

b^N{mBd+zZ^ p{bNn= N^e\_ f u}m{d}=  
U\_^ Urz^ z^OZ; Np{o|p^b^U N\$}l f>  
l {U{f^}= x m^ z^m{Q}o p{S|d{N^ n>  
uU}p}\_ f^l {p{Bp{f}m}T}Z^N}m^

33

u m^ d}m}= Dm{Q{ZN} d^AZp>q^A q{N^  
qzO q}Up{d dUmN{p{^cd{dU} {^O Uem^id+  
b{S}B l {u}U= o z^m^\_ } oB^p{^}= T{k^S|d+  
z=nx{U^zönöc} {D^1/2 {p{U}p{S}>

34

U b^U\_ zU U l {b{v\_ m^ p{am}W^<U {VU  
^/p{= \_}nU{p{pd{p{k^ bU{U^Up{m}U>  
@U^b}OYU> Na d{Qm^ Dp{O p{ \_}OZU b{m}O  
b\_c}UQ^ U p{f Vd^1/4 U fi O^ d^U>

35

z#q}Up{d bdNn^ l {zOm^1/4 U {p}ü>

qó%bU} zBø p{NmC %4p+ep{d> Ekp}\_+  
l ©c}Q^Ú> Êî bqp{“O= z=l {“Q^ Ñp}=z>  
Ê\_}ÚbE}km^m{TI {qAdÜz Û^}SÁ>

36

W|o%Ñm{zc\_pE> N{z=u}ÁmC^A E  
m{Q^E\_}ÚkpdúPô mDd\_ %4ezüm  
x m{U zbu}Ú> N{z p{z mð zbcßPp€ d{ [a]>  
zq{d+nxV= nö\_pð\_}f}b{m}Q}SÁ\_ E

37

k{h> N{TÇø m^ Q^>u}b{m€ ùxÚp{^>  
z{^Ú= l {l {l Êk{pd{Q{m%4m}p{T^ q{mzÚ  
c{\_%b}Úd€ N{p{hl {mW%Q^Q^m{p}\_}Ú  
D¼ {N^}ðm{l {p{u}Ôd{ N{m}b0>

38

@zÚdÚE Òhcn{p{ü N}w{p{u}bÚ N}o{  
Ñ\_pÚ= \_{d{ {døzl {= l {p{bb{Üi k}d>  
N{mß d{=c}Úi özZx \_}= q^ öd{E}Rñl {l  
p{p{Q^}= gn p{øN{= nzaÚt Q{m}d}p+

39

f}bd}ÚzNB^; m{d} DÚ {÷o|p€^13  
m{Q^T}Çl {l Oç\_{péô q}Ap{m> N}Dz D}>  
p{U}ÚBÐ%4dQzbt P| d}ÖYeÚ p{m}Q^Q^  
d}p^xÚE^l p{c{N{m}q{b} dAZ|x}d+

40

zq}E b{TE m{OV\_ k{p d{ p{f o{d}ô÷d} <  
u}d{= \_V> Êî d{p{Vf}z;zOm{p+ b{ç}d} <  
d{ }Úmp{O x m{zq{z\_ {m}ûd}Q}ëd{T}Ç= <  
q}d{³b{Q}Dø\_ d{ {d{ç b{çk{N{p}d}Ú

41

QT{Çd}= m{p{^p{zî= l {ç\_}= \_Û{d{N{ç <  
m{O}o³N{d{m{zî z a{z^ çk{p{Û}p{çô> <  
u; b}p{d}Ú N{ç}N{ç}z{t{O{Q} {ç} b{m{ l {ç}m{ç= <  
\_¾ {ç} \_{m{ç}d{ }{ç}Om{¾p{ç}z{Ùk{ç m{ç}N{ç} } d}>

42

\_}= N{ç}Û=ç k{p{ç}h{k{À z{ç}f}m{p{ç}l {ç}= <  
ñ\_{ç}B m{ç}Û= ç{m{ç}n{z d}\_{+P d{O}ø b{Û\_ Áw{Û}ç <  
z^am{ç}b{ç}z{d{m{ç}k{p} d}B{x l {ç}b{ç}ç{q{ç= <  
p{ç}l {ç}d{ç}n{ç} z{x -b} p{k{ç}Û{ç}m{ç}ç}\_{ç}Û>

43

\_ç{Ûd}Áo{d} {d{ç}ön= l {ç\_}= O{ç}\_{ç}d}= <  
q}d= d{ç} {ç} Ê^l {ç} ò m{¾p{d{ç}k}d{¾d{Û}W|q{ç} <  
Û}o{ç} {ç} Ê= N{ç}p{ç}n{p{ç}d} \_¾{ç} <e{x d{ç}ç= d{ç}d}Û> <  
Ê\_{ç}Ûp{ç}d{ç}B l {ç} N{ç}m{ç}ç{ç}Û b{ç}ç{ç}Ûk{ç}z^a l {ç} >

44

Q{ç}O{m}l {ç}>ç l {ç}z{m{ç}ç{ç}ç{ç}Ûz{d{ç}ç

U}l {l}\_Ue ENtî z'kQ¾næâU\_l |lep|p+  
\_û}Û bû}Û> N{p{bøqb} dÛm\_ß= d{cî}Û  
d³URNk= TZ nqgmbßDd {lexç}ð

45

\_û}Û Nç\_ Ámçt\_ø p{f}Dp}ñmq}O=  
x\_}\_ß ñn= zönpçdç p{Nk¾c¾ð\_p{xp+  
ÊN}dç\_ Náp{e zP{np{xp}dçÛk}ø  
W|\_}u}ßb¾øpç\_VEd}= N¾øü\_ç= zp{m

46

\_ß ðÔzÛ ÇTCßç\_ {pç'c} QÇzpiÔmÁ mp{Û>  
Û½¾mçßð\_z'kQç bð>el {p}dç  
ñT²m}ßzÛ\_ {zëQø's½çpç«mß= Qmç\_ |  
û¾p}\_çzm^p{l\_} N}dç¾b{p{xm}^}p+

47

\_Û {zÁÇç ðl {pçî= e'zÔp|RNç\_}\_Û  
e{s}Ôu}m²zÔel { {kp} d¾Ûp{QSA|Vo|  
mç}w\_¾mçpçkç\_} p}zùd}= Tp{çd}  
p{ }ÛbçÛ= xç\_pç p{P{z=kç\_ç\_ç\_V>

48

W¾î m|pñl " Qý\_çl {zÛi mç kp}ñ  
e#çp{l N{pñl {bwç}e Nî|Nk¾  
cÀ\_}f}S= x mç{m{T} f}pN= p{l {çmç  
eq}E bÛç^Q{mç ãmç²mçDm {a}>

49

Am}cÙd€ qmp^kpf b{p{hÄ\_}c}ß  
 tóóóóó éhN^kI }l bB^p m{UNp}{N  
 p}Únp{a}>zímó\_dI }l np{OW|= p}{dI zÚd+  
 û½\_¾p{©D}Ú k{ø zmc^\_}= mób{zÚ Np+

50

\_ß l }lÚb}\_}= Vn p{pdl{lq}æ¾pñTAm  
 \_ú}Ú tó¾z-a{p{e\_d}= b{mk}p}\_QYp}z p+  
 êxéÚÚQdQ\_I © d{d{p}{pEÚ b{É  
 m{p{N}Q{^ø p{k}{p}É^np{cÚÚnp+

51

\_} p{DmÚ ÚV zmc\_Ú{ñ}\_ øÚp}{^}=  
 ex¾Úa{f} b{zmonz\_{Áz q}m{z}^}p+  
 N{Cxf}d{Qp{c{NmÚp{s} p}{\_Úòp{x=  
 Ú}i N{mß Qzemp{a dÚNÀ\_a z o|d}p+

52

û ü ÚpD Vdz{p{a{T}Çl }l }l Q}z p}{d{  
 xÚ€ xÚ {Eadeq{d€ NAm{ \_{bOWa}>  
 m}Vd}Úd}= ú\_qm{²mÚ{Q}f p{c}ß  
 c}m}f}\_¹²Bø p{Np{o| dÚkÚp{ÚP|ð

53

∇ \_}β ü o| p{öp} \_m} = m{f} o%4 d}S|A=  
i Q{E} \_}Ú zp{m}p{P%4o|S: l }|> t{rp|  
N{ \_}β \_}u} p{ôQp{p{f} = u; p{Ú u}m{βi d}  
p{d}q{Q}β p{t k} \_} p{mp} |Ú ↑ N{z>

54

\_}ú}Ú WTC m{N}Qn = d{hm}W|p{im} =  
V∇ ©Ô> N{ }Ú = zQm{ dI } zB{u%1f} d{S}Áp+  
QÀm{N}Zm{T}d} = l }| øx μÚp{gd}z  
qp{©} > N{Q}z ^ p{N}n%4b{Q}nQ%Ôm{ }z d}

55

\_}ú}Ú > f} \_} = z m{QV Bp{p%4ú}Ô zq}A{m}ú ×  
\_}β = T{b}T{z}ÖZiN{q}b{ \_}m{A}l } d{m}Ú Qp{ }>  
z = z m{Q}d}Ú z z b{c}p{ }ú %1/2 t T}Çl }l }|u;  
u}Ú b{N}d%3zQ{ }l }p{d}z = Qp{ }p}ôm}p{|

56

A{f}d}d} = z m{ \_}n = d}ôQ{Q}m{Ú-Q}^} =  
\_}ú}Ú I p{z}k p{p{T}h = W}zÚ QÀm{ \_}s}n>  
p{x}zÚc{β}q{p{ }odI }d{L}zÚ q{S}öz{ }>  
q%k} = q{W}Ú dI }d{p{t}S%1/2} \_}zS%Áz p{ }|p+

57

\_}t T{b}B| }À z m{ z m{z}Á{Q}z = B{Z}Vd}Ú  
j}c{L} %4 |Áx{ \_}T{p{m}nk}m%4bp}Q{Ô>

@mkt Ud€ qp}l \_} p{n= p}m€}m}tzx #  
m}zd}Ôm€qp{dgo|> z=zb<sup>3</sup>/4x \$Ûp{d}p+

58

l ¶ z=mp<sup>©</sup>0\_Û\_dnk{u}>u}b\$kk\$|l { \_tÙd+  
p{N}c}bd€ zzb{qmk} n\$l ¶ l { m0p{p+  
\_} d{Am\$} p{nN{N}p{E€}\_}p{N}d+  
N{p} d{z\_Ù\_€mkp{zb€ ðz0o|mp{0l { }Ô>

59

\_Û {p{N€ b{zb{T{h^d}Ùz p{m{p{Aw>  
qqß îâ\$mi{zç\_{ö= kNd{p{>em{ }|>  
l {tÙd+b{E N{h^0Qp{ } b{m{ p{b{ \_f}f}>  
Nô0zÙd{E{m{z{b{ }z l ¶ q{d}d}>

60

q{0l {E{p{c{m{p{ðb<sup>3</sup> N{N}> z«m{p{ }|^>  
z=zN}ô #z{m{Vl © Q{ { N{d{Qm{>  
ð{b}p{ m{ Bp{T{L{A{Q{ c{ßð>u}Û\_+  
z=Q{ }N{4dd{ zq{z\_Û{k}ù zp{Q{

61

Û}o¶ { }Û{m{z\_ z p{Û Ûp{Û\_}= ð} ðβq\$}d+  
x=zb}βm{ k{Q{zî l {q<sup>3</sup>p{N}l { \_AA{Y{A{m{p+  
\_}d<sup>3</sup>b{€= b{q{p{d{zm{E{m{Q}l { }p{q<sup>3</sup>0  
q}Ûp{> f}b<sup>3</sup>/4i öðl {p{d}k{ÛbÛ\_ tÛp{0\$<sup>1</sup>/2

62

Q{ }B T<sup>3</sup> = bqp{Ok{W<sup>3</sup>T}ÇB±\_ÊÊ=ç  
Nò|zzÙ Û bqp{ } bñ^ u}Ûi a\$u}Û;  
q{S<sup>3</sup>T}ÇYI <sup>2</sup>> N{p{bøqb<sup>2</sup>m<sup>3</sup>J ø\_{Û Ñ}×O=  
m}ûk{ \_{Êi bdø p{ÛÛp{×N{u}ÛÛü z>

63

D\_Ôq}Ûø \_βl \_ ZQ{ÊÔQd}ÔSd}k  
zbÛN{D bβm bñd{Ç bQÀmzÙ \_zÙ  
q<sup>3</sup>k} p{B{Dø \_dI {dÊx{# }|=køÛ  
p{=zdÛ zî x nk{ \_<sup>3</sup>4p{TN}p}zçp{

64

∇ \_}β \_{Ûd+k{VQpñl {= q{k{d} bD{z D}  
ÛX}dò}l {bT{øz m{ }ObT}m{ QÀm  
k{S{N}Û omç \_pç> Dø\_ }DÊ{A>  
u<sup>1</sup>/d{β= N{m{ p{^i Z|m<sup>3</sup>z ^}l {QI }l \_|

65

\_Û}p{Û= pñl {N{öq<sup>3</sup>ÆE<sup>3</sup>Û{ <sup>3</sup>4 {=  
d{zÙ }β= z{m{ {p{l } l {#ç}m}Q{z \_βp+  
\_}k<sup>3</sup>J p{x{p{l {bçP{ZmÛnÇzÙ d{u}Û\_+  
ÛX}o%|> Ûp{z m{# ÆE<sup>2</sup>m}Øl {I }D}>

66

∇ p{p{ØVÛzø zön= p{dç u}Ûb{dç  
N{m{ d}Áp{= x{p{OzZÛi p<sup>2</sup>m}p{zÙ,



c{dK dAnUB}p{Nzn1 }| dU=q{N}ð zBp}\_1^2  
m}Ôd} T{E Èmb{nö\_1^2mÔmßq}E= dQÜp+

67

\_ {u1W\_ aÄÊ^l "d{Bp{ÜDQ\$|b{N^a o|=  
d{ß= b{S}ß d{z|d{m}N}= W|zÚt N}p{T}md+  
l }| p>N}o|p>î zöo%Ä}m{p{T}Emßp{d}  
p{N}W|nQáç {p{N}N}ø ñ p}k{ -Üp+

Bî p{ü Nø N}yb}zomç\_¶

p{Rb^\_¶p{ü N}pÜ

z«mß p{R> zp{D>

DDm{p{R>

(bßi l {zA})

1

øb{Ü\_ßD€ nö\_pØ\_}>t=ÜT}z= zçÜ}>  
z=QY}l {Üz \_p{mW}>tÔQÜü OmR"|zp+  
@DD1/2 }= p{^p{l }k{p{E}S}p{Ü€ öü Ü}>  
Ü}u}b}D}ß= \_{nl \_{p{N}= l {Ü{S}mßq{>

2

z ð ÷ o | Np'n p'nNij } nN(d) d } o b p +  
ñ \_ } o % C Ê z p m V u } f } f ^ \_ } p { | d d f U >  
T { \ } f } q { d p N { m p N { T } m k N i f u m z =  
f p { d f T { ß b { z Q p { V = l { U { ñ z = p c f d } p +

3

l { U % d U D U p { m p { O m } > f } b f } ð \_ U z } s } 0  
z = z q f m c \_ { m q d } ð \_ U z b } U d d d U  
N N % A f } k p d u P d % ð \_ U k } z ß \_ A o | f }  
ð \_ U W % U \_ } a O > U i z \_ { p © p f D m p { | U > U b % s } >

4

A d C N ñ d I { d z o n = l { U { d } d U m O ø S  
d } d U D } z > N { z p { q m W | b z z = l © Q u } c } U \_ +  
d } z U d U u } U \_ Q Y ^ l { N h ü b ß U l © Q % z z d } >  
ø D U } d } = d { T { O n ^ p I © l { A p d } b d U b D

5

l { u } U = l { x } > t \_ p { ^ p f l { | d U \_ U z m U U z o | ð  
W % f q } C l { | N { z p { m c \_ } d { U D p { z z ü l { | >  
A t p d f p { c { m f z n = N h O p { x z z ^ a \_ f  
z b b u ^ o m c ß z z q d N z z A m } s } ß z \_ z

6

p { C N d } U > z o n u u m ^ t p U p { | d } p { m b 0 >  
p { C m } ^ } p { d { z m { ü = U } l { | { | p } m c % s } >  
@ d f z p U > N d N { N } p { z z x z Q f } ^ 2 >

z=WXD]p{^p mp{m#}mC} l {U{Nq}U>

7

ñui QTCBt\_kañ= l {Û{op{]}xcm)^=

xAp{= m}Q} bðk{ Nms}bxz\_ {a êl {z<sup>..</sup>  
@mD.S| dðp{0 p{e f}zUm{QEb#}d+  
Ê p{© ]}d}= kp{ ogn{em^} T{mp{E>

8

l {Û{#^}= êl {p{k{W%T}CBt\_}öS\_}d}  
p{SD}ð= z m{Vð\_}= \_D{W|o|pnp{]}x>  
\_B\_á=m%c}zQp{øq b^2qADf}bmÔua|  
p}Úh p{ÖD z ÖZVnnpzÚòd {qADW}d}>

9

dU} ñ\_}>z {Qf d} l {bBp{]}d{Qk f ù<sup>..</sup>  
m}oP|Úd}= zBVnN{N} b^z p{\_]ÖbÛ zbÛ>  
q\$|Áz-ÖS} Bp{Vnp{T}D}Bb{q} W|np{]}A>  
c{p^B}m}d{N{î ðz|^} V{m} ðzÖ\_D

10

@x{ {Udm}pdðc{ }> Ê\_ Úz = mNN{[>  
DÁ}l {b0 m}zî l {q{NdQmm{U}u}m+  
p{K}W|OÚ= øi c pð\_}p}mp{P|Úzù l {  
i b}o|f} i v m{zpd{ N}ø d^4ðmBqð



±/ p<sup>z</sup> q{d}U øN{ Np}ò> tUQp}b{ m{d}ò>  
l {u}Ú D½ ¶ N{ \_p{ \_{ } © p{ |d{ = zðÔN{É=  
d}c}ÚzÚD p{ÚzQ{ q{T{D}Bp{e {exÚ z =u}>

16

\_ { } Ú Dm{m{ \_ { } Om{ eqø²m{D}ò>  
ŪX}qñ> NdNNb{p{Éd{ex{ } {>  
p{D{ d}Ú Êl { Bî zP{ T{ { } N} \_{ }  
{ex³Úf}D{z{Öm{ { { } \_}β= \_{ }p{zUm}ø

17

m{ } q³N{q{AnNzn l {> N{zmq}AÚ {N}D{>  
Ê \_}ÚzdAÔ N{mp}Np{ \_{m}Úc{p{T{ezÚ  
IN{zP|Ú Dp{z z p{ | } p{p{f}b}ôo|É  
N}S \_{d³Ú p{b{p{b{m} = b³z bT{b{U}d}u}Ú>

18

\_ { } Úc{ T{zÖZ{N{gnN} N}YAn p}zl {É>  
p{©o{ i } p{^p{ m{f} { } p{q{ÉN}d>  
\_ }ò>úY|pñl {z{kQ>d{D{ }N}D{ } | p{  
l { |p{c}ÚD b{p{zQp{ ñnN{ }> z{z - bβ>

19

Iô>u}c³z -b{ { ðv \_ 1²m{^³m{ { } a}  
b}Bm³f}D{öP; p{z{s; q{SzbAÚ T{b{É}B  
x}p{T}Çl { = kpd{p{c{d} p{bβl ©Q{ {d{d{  
z<sup>a</sup>m}Úf}l { d{On{ Np{ñ = z{zÚ u}Bp{ôP|Úp{+

20

Q\_{ }B zbÚ> Nhk{d{ }= ûÊz=f} \_{v }\_{¾  
WY}qó{Eap{Náç{mp{úu}dÀ ðzî>  
@ñ{zÚm{pdeî }= Nñ{ p{o|ÕnÕk}z=  
Ob¾{ }÷ønt\_ðk}= øb{Úb{dÚzb{Ép+

21

\_ñb q}Úp{ } úOmb{d} zNßòp{ }×cñ¾  
p{c{ }x}p{ } TNç{ }m{ }x{ } ðp{Od}ô>  
û¾{k}m} bhçQp{d} D{Nç{ }Dd}k}Ú=  
l { } \_{ }{u}Úb{Úp{ }øzl {z-Ém}b{ }p{c} \_{ }>

22

\_}= W|ña}>zmø" Nã}= ì ø\_ç p{bbi l {=  
b{m{ }p{ } " zç{Tm{TÚp}Nyø p{N}p+  
Q} ]¾{ }Á{ }= Q{m{z" b{p{ }rBz" Q{ç{ }{á j }o|=  
W|\_}= p{d{ }úump{aç}= zbcñ= p{d{ }m{ }f}p+

23

d{dç \_{u}Ú> Êi nm{bç¾{Tççd{ }Úç Êl {l { }>  
ðq}bu}d} p{úum{ }{ } { } ôd{ }p{m}cñ¾zþ+  
z Dd{ }= p{O p{zNhp{ }Úçnp{ }×nN{ }B\_+  
Bç¾{ }ò{ }= \_{ }bç{ }zm{ }N{ }D{ }m{ }k{ }ç

24

Ao¾{ }{ }ðz\_ { }z{m} u} iöp}ÚN{o| p}



29

f}b} ðð¼mp{-\_úum} È}np{|AËoS}d+  
z«mßË\_}ÚQ{p{öp{0= z=ðp{D€\_áþ{  
T{x>P} \_áönQ{m{ö>zxÙò q}ÇbI {ñ=  
u}Û€ & Ôp{ñNp{ön= d{Ëi "ó= d{z"Đ}p+

30

ðq}ßt d}cmNznI {M}d} oxéñ=  
q{ó}Ód} \_Qm{zp{ñN€ d€dp{|Q} np{xp+  
p{á=k³Q}Náp{zdp{áßzÔW%<€ ðÛ}p+  
AN}Sñ= dI {dzöo¾ Õ\ñ{ó}pN}q}p+

31

AbÛ i ó} omz bpt l {l úP| b}p{v\_}ß  
q}z u}ÚÛQó\_q{T} \_}= p{l ©bññI {l p+  
zÖm{NS} p{l {ø\_ dP{d}zN€\_}ámI {ñ=  
Q{ }k³Q} \_Á [dózp{| p{Np{ñ= Nñ

32

u} zdÔÛ}kñ p{i o| eqñ= c}mI {ñ  
qI ©Ú\_áSðv\_p{zN€ ó>Ob{P{Q}Û€  
\_}Bp{zÛ= dpVnp{l {= p©T{ zÚ\_Ûp{Û=  
Û}l {zám³B kp{ Nñ^}p{D m}ÛDñ}\_Û

33



W|d3/4zP|U z p p l p d z = k t U x p u } U  
b N k } = E a p { o m v } p { z = m A l { | o  
p } T } n = p { | = d { O n z k Q p { U d U k } p z N m 3/4  
E U x { \_ P n p { c m } b } O Y m N p l { | l { +

34

m { O f } S E z m p { n N m Y d t O x q a d U =  
E \_ } U b { } b e T { p { c { d 3/4 o z - U \_ k a o o | z =  
\_ B l { | U z d O d l { d { p { z m z O q S A p { - Q } x } U  
u d } x 3/4 k } T A n N { p h l { U \_ { o | p z U i i

35

p } p { q } A u } U N m n { z z b 2 m { U T U p { | d 3/4 p { b 2 } >  
p { N } W | n = c m e m c \_ e \_ } U e \_ 3/4 b p Q { } U  
z = k 3/4 Q } E p { p { z p { c \_ 3/4 z D z = p } z d } d =  
l { | z U \_ a U m { z m z N b { z p { O Q A m q A n \_ B p +

36

\_ e U d } A o V n b { l { b u } n O U } z P | u } U  
b e { B e U d } = D o \_ o p { P 3/4 l { | p { p { | U e z z z b  
p { | k a b u } U E ^ l o p l z b z O n j N a e c \_ +  
z b U N T { U k { V n \_ } O N Q } ] 3/4 z Q a ] p +

37

\_ } p { N z U z B V n N { n } u \_ o { d } d o { {  
E \_ } U q B D } = z p { l { o d p { E } n N m } U n i d } p +

ob{UAnk} > D0 \_dl {d} = \_k \_ad} a{Uq} x{  
pN{- cN} > D0 \_p{T d^2m} Uon = U{Np{a} >

38

k{mU} U{e} l {p{ocp{p} p{p{x} p} x =  
\_ {a=b} m{b} {d v ^2m} Q{e} \_k \_u ep +  
l © i -D) d \_km {i} za{d} p{U} = U{1/2} \_d} =  
p{U} O{Q} m{d} o | p{p} x^{3/4} {aN} d

39

B \_} UP | U \_{epd} {dl} {- p^2a e p^3d {UP au}  
\_ } B p{ \_A T^3 T C B t \_ x -b} { | uxU zk} OpU T p {  
U^3 zU \_U} U \_Om{p} \_ } u; p{U} ep{Dnd} =  
N} d^3 b{z} a x -b {ed} {za = Qp} | i A = c b^a d x

40

\_ } p{ | l { zU dUp { T {p T d} b} \_ Ude^{3/4} E z N d i =  
U^a l { | b p e \_ p {z x T m^3/4 m} p {Q m} U d p { z }  
@ p} U z d Q > N {q h p {i o} e - T C i \_ } B = o l { N x  
z « m } B k } z U = z n k { e b } = U } ^ p } p L { b p {

41

@ S {d} S = U \_ d { \_ d {d} Q } | { p d { D =  
u } U ^ } U { U { p { o m { 3/4 A T p { \_ A T } U {  
D S^{1/2} } C B z = z p { c N { m^3/4 } C B t d } b^a m p D Y  
z S A b U S m B q i o c d } p m ^ } m { O p } | A x

42

q}ÖPÜÍ {= l {bÉ Nâ \_|| {> zPd}= z|md}\_+  
 Ní|o³n>NáI \_ {p{kª b}ddzÖmã{o³k}\_+  
 u½<î Û}d& ûp^øzl {= o³Td}k}Ú p{b-fqÜ  
 D}B p{ \_Á^ }ømc \_eb& p{d{ÜP|d}p{p}z

43

q}Úp{z} zBŠ=TNc z m^êx^· b{Éf}\_&  
 p{#T}Çl {|= q{ð úPd}= i ãk}mz Nq}d+  
 D\_Qq}Úø \_ê\_d{z dbÿçz Ûªøo|u}d+  
 z dN&Ù dÁBçbe d{ TÁ|u}b-fqÜ p{D

44

\_}B p{z}öOÚ ê^l {N{e\_}= c}\_ {m}Q²úào|l {z  
 p{z}\_}Úd& \_T{m^zê \_&l {z}pbT}Çø N{p+  
 @§ D}p{d{Úz § m{zç¹²}Ö{Em}n zÚ\_p|  
 Ûª m{D±Ù dQe d{z z \_TzSp{= dÀ N{ \_}d&

45

p{z} p{z}N}qê^ N \_k{V= ðB| {z}qz p \_¾  
 mQl {z} Náp{e p{z} {z} zBzÖz=b{m{d}z  
 zq{Üd}= d{On i z §q¾d{z}b{p}d}=  
 p{z}N}zªo| Dm{Nznl {z}Bq{oz}>z\_ð

46

ô\_}ß z bŮ> Nēnl {z|Z| Œb}m{Ů{p|}^}=  
l ¶\_ā mē ī z mkI © b×c d{Œp{D}>  
AöŠŪŒQ{^pī pīl {l\_¶{s}m}Ůp}\_>  
z«mß= z-ŌĒ= l {bçNā kp|bŒp|ôĒz p¶

47

c}m}t Nēh z mō^ Œbd{ŪO u}ŪzŪj }o¶  
b{mK{ \_Œ Œ\_d{p{e p|} = zYĀj }^>xĈ¼  
Œm}ŪŒp²pb{i\_ {NāŒ p}zm}^j ŮWl {>  
bNā=zN} Œom{Œd}pŪŒz^am}Ū\_f}ð

48

z=xŒŪ {xĈ Bp{NāŒ bŒ¶ {p|} Ůl {p|}  
zm}BpŮ zßz mē NāŒ p{Œp{Œ}\_Œ= u}Ū\_+  
BŮŒ T¶ {qŒZ ndI {d¶b{mkŮ}ndŒ p¶  
Q} ] ¾}ô> NŒ\_p{qmĈ = \_ßbßl ©QpŪa}ô>

49

d{ }ß\_}ŪdŒ i z S øQĈl {d}Ō\_Ū d²p}pŒp|×  
\_{Āo|Ū^j\_ßp{e ð\_m} = p{|Qp{>N}\_ndßp+  
NŒŪN}ŪŒ z'0 p{z d\_lŒ b{>0 p¶N}Ū{¾p}  
ñTŒŒŒ \_{ŪzmçT{bq} TŮdŒŮŮp|^

50

q}f}d¾p¶ k{VQqI {d} b{Ů\_q}mĈ}^À  
qŒ} d}Ūu} Œp|l {T\_{m¾o¾T d¶u nl \_}ß

zqj}Aib}p}= omx Q}'^: t \_t \_{p}l\_}Uôo|z=  
ðm{x}Úp{x}em^ \_{m}T{A}D}z x{f}z

51

k^l {q}Axz \_{p}e qI {d}N{nQ}Ô z{m} pI  
ðb}= Q{ }B Np{e m{b}i zzbdf oEi "b  
u}D{a}z= Nâc {p}zN{ \_{T} \_{q}E \_{B}l { } pI  
'b{z} zBpÔ Nc p{m}p{l {d}Ap{e \_{B}= p{l I î

52

I \_{u}Û d}Û= N{qôd{p{ô}W|d{b}d} bBb{c}B  
p{l N{â:d} b{t} dI {d}p{l {Uoq}Btñ k{^>  
tÔü d}z{S>Np{e omx cB=td{ \_{B}k^Q}  
b{E} p{E} d{U{z{c} \_{m}i}> {ep{m}ûk{p}D

53

Aq}B zÚp{x} z{ap{x} omx ©b{Q}q^M}= zP= \_{I  
qô| b}q{ Û dI {d}p{t{s}^1/2} \_{N}Z| ðÔp{t}D{x  
u}ô{W|d{t} z{v} \_{N}qô{D}b{B}T^3ô m{U}p{l}e  
Û} \_{N}Q{E}z{p}a{a}ñ= i o \_{t} c}m{l {a}>

54

Nc{E} Aâp{x}Úp{Úp{t} \_{ø}b{t} i{Q}N{t} \_{U} \_{B}l { } pI  
z \_{ }Úb{ }d{Q} On" kp{l 3/4c{ }= NñÔl { }ø"  
ðq{Q}^<e z{b}q{t} Vn= l { }ç \_{q}E \_{N}K{U}>  
z \_{ }ÚN{t} z{ ^}l "z" z \_{ }ù eâ \_{ }m{N}N{t} ^p{

55

I\_{\{A\}}\beta \hat{e}l \{p\{d\{c\_{\{f\}}\tilde{m}\}}b\}\_{\hat{u}d^{3/4}p\{  
u; \times \hat{m}\} b\} \beta \delta c\{m\{B\hat{i} p\} p\{l \{ \hat{u}d\{N^{3/4}\{ \cdot \hat{b}\} \hat{u} \}  
B\hat{s}\} \hat{c}\{ \hat{m}\} \hat{e}\{b\{\delta T\{m\{f\}\}p\{s\} z=k\{ \hat{u} \}  
m\} \hat{u} k^a b\{ \hat{p}\{ \times \{ p\{e\{T\{ \{ \delta b\{ \hat{u} \} \} \delta \hat{e}l \} \hat{c}\{Q\}

56

\{ \hat{a}=b\{ \hat{c} \{ Vnc\{m\{m^{3/4}b\hat{p}\hat{u}\}T\} T\{ \hat{x}\{ \{  
\hat{f}\}^{\wedge}\} = \hat{z}\{u\} \hat{u} Vd\{ \hat{v} \}\_{m\{p^{3/4}m\{ \hat{c}\} \{ = l \{ x\{p\{ \hat{c}\} \} \beta >  
\hat{f}\} f^{1/2} b\{ \hat{d}\} \hat{e}\{p\{ \hat{b}\{ \hat{p}\{ \hat{d}\} > u\} e \{ \hat{u} \} z\{b\{k\{ \hat{d}\} >  
N\{ \hat{s}\} = d\{u\} \hat{u} b\{ \hat{p}\{ \hat{g}\{o\} \{ \hat{f}\} \{ \hat{m}\} \} \times \hat{s}\{ \hat{u}\{ \hat{p}\{ \{ \hat{d}\} \} p\{+

57

\hat{q}\{ \}\_{\beta} p\} \hat{m}\} = Vnb\{N\{ \hat{a}\{ \hat{c}\} = \}\_{ = c\{ \hat{d}\{ \{ \{ < e z\{b\{ \hat{u}\} >  
q\} \hat{z} u\} \hat{u}\{ \hat{d}\} \hat{c} z\{b\{ \{ \{ \times -b\{ \{ \{ z\{ \hat{d}\{ \hat{c}\} \} l \{ \{ \hat{d}\{N^{3/4}\{ \hat{z} >  
z=l \} \hat{c}\{ \hat{w}\{ \hat{u}\} \hat{a}\{ \delta Q\{ \hat{y}\} \{ \hat{q}\{ \{ T\{ \hat{a}\{ b\{ \hat{z}\{ i \} \times -\hat{z}\} \hat{c}\{ \hat{d}\{ \hat{a}\} >  
k^{3/4}\} \hat{d}\{ \hat{s}\} \} \hat{d}\{ \hat{p}\{ \{ \{ z\{ \hat{p}\{ \{ \hat{d}\{ +\hat{f}\} \} \hat{z}\{ l \} \{ p\{ \{ \{ z\{ k^a\} l \} \{

B\hat{i} p\{ \hat{u} N\{ \delta N\} \hat{y}\} b\} z\{ \delta m\{ \hat{c}\} \}\_{  
p\{ \hat{z}\{ b\{ \hat{a}\} \}\_{ p\{ \hat{u} N\} \} p\{ \hat{u}\} >  
D\hat{d}\{ m\{ p\{ \hat{z}\} > z\{ p\{ \{ \hat{z}\} >