

তথ্য ও যোগাযোগ প্রযুক্তি

সপ্তম শ্রেণি



জাতীয় শিক্ষাক্রম ও পাঠ্যপুস্তক বোর্ড, ঢাকা

RvZxq wk¶vug l cW"cy-K terW©KZK 2013 wk¶vel¶_tK
mBg tk¶Yi cW"cy-Ki#c wba¶i Z

Z_ I thvMvthvM cöw³
mßg tkw

i Pbv

W. g^ɲɛʃ Rɪdi BKeɹ
W. mɪvBqɪ cvi fɪb
tɔv⁻—dɪ ReYvi
gɪbi nɪmvb
jɪdi ɪngvb
tɔvt ɔbweYi tɪvɪmb

RvZxg wk¶vµg | cvW"cy-K tewW,© XvKv

RvZxq 𐌹𐌵𐌹𐌺𐌰 I cV̇cȳ–K 𐌹eẆ[©]
69–70 gWZiSj eWYwṘK GjvKv, XvKv–1000
KZ℞ cK̇wKZ |

[cK̇vK KZ℞ me[©]^Z_imsi 𐌹𐌹Z]
ci x𐌹𐌺𐌰j K ms[–] < i Y

cŭg cK̇vK : 𐌹m𐌹P𐌹^i , 2012

cV̇cȳ–K cŸq𐌹b mgš^qK
𐌹gt 𐌹gvL𐌹j mDi i ngvb

KẇúDUvi K𐌹𐌹úvR
Kvjvi ṀndK

cŰ`
𐌹gv[–]–ẇdRj i ngvb

𐌹Ṗi v̇¼b
ẇ evKi mvgš–

𐌹WRvBb
RvZxq 𐌹𐌵𐌹𐌺𐌰 I cV̇cȳ–K 𐌹eẆ[©]

mi Kvi KZ℞ 𐌹ebvg𐌹j[–] 𐌹eZi𐌹Yi Rb[–]

gȳ 𐌹Y :

$$c_n^{1/2} - K_v$$

ukᑭᖃ RvZxq Dbwqtbi ceRZᑯ Avayok I hᑭMvcthvMx ukᑭᖃ Qovov AvZwbfpKxj , ᐱᑭᖃ
 ghᑭ vm=ubceRwiZ MVb m=ē bq| G cĹᑦq I cᑯYv bv †_tKB RvZxi ukᑭᖃvbxmZ 2010 cᑯX
 nq| G ukᑭᖃvbxmZ†z weÁvb, Z_ thvMvthvM chᑭ³, Kwii Mui ukᑭᖃ, agᑯI bwZK ukᑭᖃ†K
 cĹavb† †lqv ntqtQ| ukᑭᖃvbxmZi jᑭᖃ I D†íK mvgtb titL bZb GK RxbvKiᑭᖃ I
 ev-eZvi cuᑭwtZ wel q wetklÁ, ukᑭᖃvug wetklÁ I tkŲY ukᑭᖃKM†Yi mgštq cᑯX nq
 ukᑭᖃvug| G ukᑭᖃvug Abjhvx ††ki cᑯZhkv tj LK I m=úv KM†Yi HKwšK cᑯPóvq
 cvWcȳ-KuU cᑯqb Kiv nq| cvWcȳ-KuUtZ evbtbi †ᑭ† evsj v GKvtWgx KZR cᑯX
 evbvbi xiz Abyni Y Kiv ntqtQ|

2010 mŧj i gta` ŌWwRUvj evsj vŧ kŌ A_Ŧ Z_` I thvMvthvM chj³ e`envi Kŧi
evsj vŧ ŧki mKj gvbŧi Rxeŧb mnR, mŷ`i I Avb`gq Kŧi Mŧo ŧZij vi j ŧŧ` mi Kvi
KvR Kŧi hvŧ`Q| ŌWwRUvj evsj vŧ kŌ Movi Ab`Zg gva`g nt`Q weÁvb I chj³ wbfŦ wkŧŧv|
ZvB RvZxq wkŧŧvbwZ 2010 G lŏ ŧŧK Ōv`k ŧkŧŧ chŖ-Z_` I thvMvthvM chj³ welqW
wkŧŧv e`e`vi mKj avivq eva`Zvgj K Kivi K_v ejv ntŧŧQ| ZviB avivevnKZvq
cŌgerŧii gZ cŧŧZ ntŧŧQ G cvŧ`cŷ-Kuŧ| cŷ-Kuŧ cŌqvrBxq Ōmemn mnR fvlvq
wkŧŧv_FevÜe Kŧi iPbvi ŧPŏv Kiv ntŧŧQ| Avkv Kwi G cvŧ`cŷ-Kuŧ wkŧŧv_ŧ`i Z_` I
thvMvthvM chj³ welŧq cŌ_wgK aviYv ŧ`I qvi cvkvcvk cwi eZxŧZ G welŧq cŌ_wgK aviYv
ŧ`I qvi cvkvcvk cieZŧZ G welŧq Avŧiv AvMŏx Kŧi Zj ŧe hv ŌWwRUvj evsj vŧ kŌ ev-
evŧŧb Kvŧŧi fvgKv ivLŧZ mrvh` Kiŧe|

gj`vqb wk¶vutgi GKwU Awet`Q` Ask| wk¶v_xPv AnRZ Ávb | Abpaveb ev`-e Rxeṭb
 c¶qvM KitZ Ges ṭKvṭbv melqṭK wePvi- weṭK ev gj`vqb KitZ cvṭi wK bv Zv hvPvB
 Kiv gj`vqṭbi Dṭi`k| ZvB gj`vqbṭK dj cṭh-Kivi Rb` cṭZwU Aa`vq ṭkṭl Abṭxj ṭbi
 Rb` bgpṭv wṭṭṭe enṭbePwB cṭkæmsthvRb Kiv nṭqṭQ| Gi gra`ṭg wk¶v_xPv`i gj`-
 wbfPZv enj vsṭk nvm cṭe|

Wk¶Vµg Dbq̄b GKū avivewnK cīqv| wk¶Vµtgi welqe-’ I wbt̄ Rbvī Avtj vtK
cV˘cy–K i vPZ nq| ^r mgtqi gta˘ cV˘cy–Kū cīqb Kivq WKQz fj µU t_†K th†Z
cv†i | fel˘†Z cV˘cy–Kūi mgw× mva†bi Rb˘ th†Kv†bv MVbgj K I hµ³m/₂Z civgk©
i†Zji mv† wetevPZ nte|

cW'cy-Ku I Pbv, muv' bv I cKrkvi KvR hviv tgav I kḡ w' tqtQb, Zu' i RvbvB
Avu' K ab'ev' I KZÁZv| hv' i Rb' cW'cy-Ku cVxZ ntqtQ Zviv DcKZ ntj
Avgv' i G cuvm mv_ R nte|

cödmī tgv̄t tgv̄⁻-dv Kvgvj Dwl̄ b

†Pqvi g`vb

RvZxq wk¶vµg I cvV"cy-K

terW[©]XvKv

mPcĬ

Aa'v̇tqi bvg	Aa'v̇tqi wk̇i v̇bvg	côv
cĬg	cĬZ'ẇnK Rxeṭb Z_'' I thvMv̇thvM cĬy³	1-16
ẇZxq	KẇṗûDUvi mṡwk̇é hṧcẇZ	17-36
ZZxq	ẇbi v̇c` I ^bẇZK e'envi	37-52
PZĬ©	I qvẆċṁms	53-60
cÂg	ẇk̇ŋ̇vi B>Uvi ṭbṭUi e'envi	61-72

Aa'vq: 1

cöZ''wnK Rxeþb Z'' I thvMvþhvM cöy³



GB Aa'vq tkþl tZvgiv :

1. e''³Rxeþb Z'' I thvMvþhvM cöy³i e''envi e''vL''v KiþZ cvi þe;
2. Kgþ''lþ Z'' I thvMvþhvM cöy³ e''envþi i t''lþ wþZ KiþZ cvi þe;
3. Kgþ''lþ Z'' I thvMvþhvM cöy³ e''envþi i ,iZ;wþkH KiþZ cvi þe;
4. mgvR-Rxeþb Z'' I thvMvþhvM cöy³i c'fve gj''vqb KiþZ cvi þe|

cW 1 : eĭw³ Rxeþb Z_ I thMþhm cĥy³

cW_extZ KtZv bZp bZp cĥy³i Rbĭ nt"Q, Avgiv nqtZv Zvi me,tjvi K_v RvbtZI cwi bv| ZvB tm,tjv nqtZv Avgvĭ i Rxeþb tKvþbv cĭve tdjtZ cvti bv| wKŠy-Z_ cĥy³ Ggb GKwU cĥy³ th tm,tjv Avgvĭ i mevi Rxeþb tKvþbv bv tKvþbv fĭte cĭve tdjtQ| cW_extZ gtb nq GKRb gvbtĭKI LĭR cvl qv hvte bv th tKvþbv bv tKvþbv fĭte Z_ cĥy³ eĭenvi Ktiwb wKsev Zvi Rxeþb Z_ cĥy³ tKvþbv bv tKvþbv cwi eZB Avtb wb|

Z_ cĥy³ kpyth ivóĭq eĭcvti eo eo wettq wKsev AvŠRwZK RMtZ eĭenvi nq Zv bq- GtKevti maviY gvbtĭi maviY Rxeþb tKvþbv eĭenvi nq| Zvg hw tPvL tgjt PwiwĭtK ZvKvL Zvg t`Lte tZvgvi Pricĭtk tZvgvi cwiwPZ gvbtĭiv, tZvgvi AvZĭq ĩ^Rb, tZvgvi ĩ<tji wKĭtKiv Ges Zvg I tZvgvi Kĭki eÜz evÜteiv tKvþbv bv tKvþbv fĭte Z_ cĥy³ eĭenvi KtiĭQ| GB th Zvg GB gütZGB tjLwU coQ tmwU tKD GKRb wj tĭtQ- Z_ cĥy³ eĭenvi Kti tm,tjv Qvcv ntqtQ, tZvgvi mvgtb Avbv ntqtQ Ges Zvg GLb coĭZ cviQ| GiKg KtZv D`vniY t`qv hvte- Zvg KĭbvL KtZ cvte bv|



Avgvĭ i Pricĭtki th tKD GLb Bt"Q Kiĭj
Ab" GKRtbi mĭt_ tgvevBj tUwj tĭvĭb
thMþhm KiĭZ cvti |



tUwj wĭkb GLb wettb"tbi metPtq eo gĭg|

GKRb gvbtĭi Rxeþb Z_ cĥy³i Kx Kx eĭenvi ntZ cvti Zvi GKUv Zwj Kv ^Zwi Kivi tPóv Kiĭj tmUv gtb nq tKvþbw b tkl Kiv hvte bv| wKŠy-GKUv tPóv Kti t`Ljt tKgb nq? AŠetĭ ĭiZcYKtqKUv tPóv Kti t`Lv hvK|

eĭw³MZ thMþhm: Z_ cĥy³i eĭenvi metPtq cĭg D`vniY ntZ cvti eĭw³MZ thMþhm|

Avgvĭ i Pricĭtki cĭq mevi KvQB GLb tgvevBj tUwj tĭvĭb iĭtqtQ, th tKD GLb Bt"Q Kiĭj Ab" GKRtbi mĭt_ tgvevBj tUwj tĭvĭb thMþhm KiĭZ cvti | tZvgiv wĭĭqB Abgyv KiĭZ

cviQ th tKv³bv gvb³l i m³t_ tUwj³tdvb thMvthM Ki³Z cvi³vi Kvi³tY Avgv³t³ i Rxe³bi gvb GLb A³tbK te³to w³Mtq³tQ, A³tbK Kg cwi³k³t³g Avgiv GLb A³tbK w³KQyKi³Z cwi³ thUv Av³tM K³i³bv³l Ki³Z cvi³Zvg bv³l

w³etbv³b: Z_ c³h³ w³ t³q Avgiv th i³ay KvR Ki³Z cwi³ Zv bq- GUv GLb w³etbv³tbi³l PgrKvi GKUv gra³g n³t³q w³otq³tQ³l Av³tM Mvb tkv³bvi R³tb³ gvb³l³tK Avj³v³fv³te tKv³bv GKUv h³š³ w³Kb³tZ n³tZv- GLb tgvevBj tUwj³tdvb³B tm Mvb i³b³tZ cvi³t³l GKUv mgq K³v³t³g³iv w³Qj i³ay eo tjvK³t³i w³elq- GLb m³raviY tgvevBj tUwj³tdvb w³tqB th tKv³bv gvb³l Q³ue Zj³tZ cvi³t³l, w³f³w³l Ki³Z cvi³t³l tgvevBj tUwj³tdvb thiKg ax³t³i ax³t³i e³f³g³vb GKUv h³š³ n³t³q v³ov³t³Q thUv w³ t³q A³tbK ai³t³Yi KvR Kiv hvq- w³WK tmiKg K³w³u³D³U³vi³l t³QvU n³tZ i³i³ K³ti³tQ³l tW³<Uc t³tK j³v³cUc, j³v³cUc t³tK tbvU e³K, tbvU e³K t³tK w³U³tdvb A³Av³t³ i n³tZ Ggb GKUv h³š³ P³tj Av³mt³Q thUv w³ t³q Avgiv AmsL³ KvR Ki³Z cvi³e³l



w³R. w³c. Gm. c³w³exi th tKv³b RvqMvi Ae³v³b tei K³ti t³dj³tZ cvi³t³l

w³RicGm: Mvox Pwj³tq tKv³v³l h³veri c³Qg kZB n³t³Q Avgv³t³ i c³NvU w³Pb³tZ n³te³l tKD h³w³ c³NvU w³Pb³tZ bv cvi³t³l Zvntj tm tKgb K³ti M³š³te³ tc³Q³te³l A³_P gRvi e³v³cvi nj tKv³v³l th³tZ n³tj GLb KvD³tK c³NvU w³Pb³tZ n³q bv- c³w³exU³tK w³N³ti A³tbK³,tjv DcM³h Nj³tQ Ziv c³w³ex³tZ m³stKZ c³v³vq, tmB m³stKZ³tK w³etk³Y K³ti th tKv³bv gvb³l e³f³S t³dj³tZ cvi³t³l tm tKv³v³q Av³tQ³l Zvi m³t³ GKUv RvqMvi g³v³c³tK R³to w³ tZ cvi³tjB GKRb gvb³l th tKv³bv RvqMvq P³tj th³tZ cvi³te³l AvRKvj bZb me Mvox³ZB w³RicGm j³w³M³tq t³qv n³q- tKv³v³q th³tZ n³te tmU w³RicGm G X³g³K³tq w³ t³j w³R. w³c. Gm. Mvox³ w³B³F³vi³tK m³w³K c³_ evZ³tj w³ t³q M³š³te³ tc³Q³ w³ tZ cvi³te³l

j³MZ KvR
g³tb Ki Z³g w³K K³tiQ tKv³bv ai³t³bi Z_ c³h³ e³envi bv K³ti t³Zvgi w³ b KvU³te³l m³iv w³ tb tKv³b KvR³,tjv Z³g Ki³Z cvi³te³l bv Zvi GKUv Z³wj Kv Ki³l

 **bZb w³Ljvg :** tW³<Uc, j³v³cUc, tbvUe³K, w³U³tdvb, w³RicGm³l

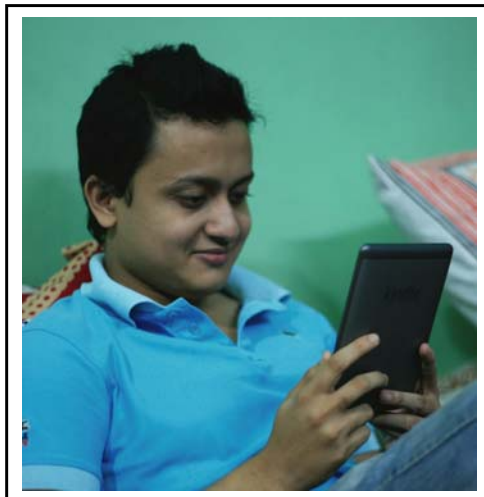
cV 2 : e'w³Rxeþb Z' I thMvthM cþ³.

^^bwb Rxeþb Avgiv côZ gnþZ'Z' I thMvthM cþ³K e'envi Kwi - G cþ³ e'envti Avgiv GZ Af'Í ntq tMq th AþbK mgq wclqUv Avgiv j¶ chS-Kwi bv! e'enviUv KZ e'vcK tmUv tevSvi Rþb Avgiv KvíwbK GKRB gvbþli GKUv w`þbi K_v wPŠv Kwi - aiv hvK Zvi bvg mMi |

mMtii Ng fv0þjv GjvþgP kã, tm Zvi tgveBj tUwjþdvþb tfvi QqUvi Gjvgw`tq tiþLwQj | Ng tþK lvi ci c0þgB Zvi gþb coj AvR QjUi w`b, ZvþK KvþR thþZ nte bv! mvt_ mvt_ Zvi gbUv fvþjv ntq tMj | Gjvgþv eÜ Kivi mgq j¶ Kij tmLvþb tW< K'vþj Üvþi ZvþK gþb Kwiþq w`tqþQ AvR Zvi eÜi Rbwb, wþKþj Zvi evmvq Rbwb þbi Drme |



KwþuDuvi e'envi Kþi Mwþ tkvþv hvq |



B-eK wi Wvi e'envi Kþi eB cov hvq |

nvZ-gL aþq bv'lv Kitz Kitz tm tUwjwfkþb tfvþi LeiUv iþb tbq | avþbi evþuvi djb ntqþQ iþb Zvi gbUv fvþjv ntq hvq | Avevi eþ½vcmmþi GKUv wbgþvc ntq NwSþoi AvksKv t`Lv w`tqþQ etj mMtii LwbKUv `þŠH nj |

bv'lv Kþi mMi Zvi j'vcUcwU wþtq eþm, c0þgB tm Zvi B-tgBj þþv t`þL, Zvi cþvwx fvB Zvi cwievþi GKUv Qwe cwmþtqþQ | QweUv fvwi my`i - mMtii gþb nj tmUv Nþi Uwbþq ivLþj g` nq bv | ZvB tm wcuUvþi tmUv wcuU Kþi wþj |

B-tgBþj wPwctþi DËi w`tq tm Zvi wcuþ KþqKUv Mwþ evRvþZ 'i' Kþi t`q | Mwþ iþþZ iþþZ tm Zvi B-eK wi Wvþi GKUv eB coþZ 'i' Kþi | Zvi wcuþ eB coþZ coþZ Kxfvte th mgq tKþU tMj eþþZB cvi j bv!

hLb eBUv tkl ntqþQ ZLb GKUvþjv ntq tMþQ | nVvr Kþi Zvi gþb nj evmvq Llevi wKQy tbB | evRvi Kiv nqwb | mMtii nVvr gþb nj BþvþþþU Llevþi AWþ t`qv hvq - Zviv evmvq Gþm Llevi tcsþQ t`q | mMi ZLbB BþvþþþU Zvi wcuþ Llevi wcrRvi AWþ w`tq t`q |

WKOYi gvtSB nwm-Lyk GK ZiY Zvi evmq wcrRv wbtq Avtm| mMi ejj, 0Avgvi evmUv
LpR tctZ tZvgvi wK tKvbn mgm'v ntqtQ?0 ZiYwU ejj, 0GKUz Amyeta nqwb- Awg



KwúDUvi tbUI qvK³envi Kti Nti etm mviv
cw_exi mv_ thvMvthvM Kiv hvq|

wRwcGtm tZvgvi wKvbnUv w`tq w`tqvQ,
tKvb ct_ AvmtZ nte etj w`tqtQ!0
mMi tLtz tLtz Avevi Zvi KwúDUvfi
cw_exi LeivLei tbq| wbdwUfbv wbtq
weAvfbi GKUv PgKc0 Lei tei ntqtQ|
wbdwUfbv Kx- mMi tmUv Rvfb bv ZvB tm
DBwKwvWqvZ wbdwUfbv m'utK³PgrKvi
GKUv tj Lv cto wbj | iayZvB bq, bZb
GKUv wmtbgv Lp bvg KtiQ- wmtbgvUv
t`Ltz g` nq bv| mMi ZLbB wmtbgvUv
WDbtjwW Kitz i' Kti t`q, ivtZ tm
tmUv t`Lte|

wetKtj eÜi evmq Rb`b' b'bi Drmte hvte- ZvtK wKOyGKUv Dcnvi t`qv`i Kvi, eÜwU eB
cotZ Lp fvtjvevfm ZvB mMi BvUvfbtU GKUv eB AWf w`j -
e'vstK ht_ó UvKv AvtQ wK bv Rvbn`i Kvi | mMi
ZLb Zvi e'vstK tLwR wbj, tmwfsm t_tK wKOy
UvKv Zvi tPwKs GKvDtuU wbtq Avtm|

jMZ KvR
GLvfb Dtz E-Kiv nq wb Gi Kg Avi Kx
Kx KvR Kiv m'v Zvi GKwU Zwj Kv Ki |

Ni t_tK tei nIqvi mgq Zvi tgvvBj tetR Dtv- ewo t_tK Zvi gv tcvb KtiQb| mMi
wRtAm Kij, 0gv fvtjv AvQ tZvgiv?0 gv ejtjb, 0n'u fvtjvB AwQ, Zte tZvi e'evi PkgvUv
gtb nq e`jvtZ nte, uó bvKx t`Ltz cvq bv|0 mMi ejj, 0Zwg wPšv-Ktiv bv gv, Awg
mvgfbi mBvtn Ptj Awe, e'evfK tPvLi Wv³vii KvQ wbtq hve|0

gvfqi mv_ K_v tkl Kti mMi tgvvBj tUvjtdvfb ZLb ZLbB tUfbi wUtkU eK Kti t`q|
fvtjv tPvLi Wv³vi tK ntZ cvti tLwR tbevi Rtb' tm ivtZ B-wPwKrmv tKt`^atLwR tbe|

eÜi evmq Rb`b' b'bi Drmte mevB wgtj Lp Avb` Kij, tQvU ev'Pviv Ntii GK tKvbnq
nBPB Kti KwúDUvi tMg tLjtQ| ivtZ Lvevi tLtz mMi evmq wdti Avtm, ciw`b KvR
thtZ nte ZvB tm mKvj mKvj i`tq cto, weQvbnq i`tq i`tq tm tkl LeiUv i`tb tbq, Dcmh
t_tK Qwe Ztj t`Lv tMtQ NwYSoUv Nfi Ab`w`tK Ptj tMtQ, t`tki tKvbn wec`tbB| LeiUv
i`tb mMtii gbUv fvtjv ntq hvq- wbowš-gb wbtq tm NgvtZ tMj |

Kv'wbK gvb'li Kv'wbK w`bvjwc GLvfbB tkl - tZvgiv Kx j` KtiQ Z_ I thvMvthvM chv³
w`tq tm mvivUv w`b KZ KvR KtiQ? Aí wKOy`b AvtMI tKD wK GUv Kíbv Kitz cvi Z?



bZb wLjvg : B-eK wi Wvi, DBwKwvWqv, WDbtjwW, B-wPwKrmv tKt`^a



ersj vt`tki chp³we`ti `Zwi Btj KUibK tfwUs
tgukb e`envi Kti t`tk AvRKvj tfvU t`qv Avi
tfvU MYbvi KvR`ii" ntqtQ|

GLb tmlU ev`tem\$Z ntqtQ| GLb
AtpK Andm c`ivcpi KvMRienxb
Andtm cvtë tMtQ| thB Andtm KvMR
wKQy wj LtZ nq bv- KvRuDviti wj tL
GKRb AvtiKRtbi KvQ cWtq t`q|
KvRuDviti,tjv tbUlqvK`w`tq GKwUi
mvt_ AvtiKwU hÿ ntq AvQ KvRB
tPtLi cjtK me KvRKg`ntq hvq|
KvMR wKQy tjLv nq bv etj KvMRi
LiP tetP hvq| KvMR `Zwi nq MvQ
t`tK ZvB hLb KvMR tetP hvq ZLb
MvQI tetP hvq, cwi tekUv `vtK AtpK
my`i| KvMR tjLvq Kwj tUvbi e`envi
nq bv etj imvqwbK `ë" w`tq cwi tekI
`tY nq bv|

hZ w`b hv`Q KvRuDviti gwbUi,tjv nt`Q eo, ZvB tmlvB wKQy GKUv covi KvRwU
ntqtQ AtpK mnR| t`Lv tMtQ bZp cRtbi gvb`liv AvRKvj wKQy GKUv KvMR bv wj tL
KvRuDviti wj LtZ cQ` Kti, KvMR bv cto gwbUi covB `^Q`" teva Kti| GKmgq
K`vtgivq Qwe Ztj tm,tjv imvqwbK w`tq wCÜ Ki tZ ntZv| AvRKvj K`vtgivq Qwe wCÜ bv
KtiB gvb| mivmvi KvRuDviti ev tgevBtji w`tq t`tL tbq|

Avgt`i t`tk KvMR Qrov metPtq PgKcÜ KvRwU nt`Q tfvtUi tgukb| t`kwU MYZwšK,
MYZwšK t`tk menKQß WK Kiv nq wbePb Kti, wbePb tfvU w`tZ nq| tfvU t`qvi Rtb`
`iKvi e`vjU tccvi - A`r KvMR, thLvB cÜ`i bvg Ges gvK®Qvcr `vtK| tfvUviti
tmlvB wj tgiti e`vjU evt. tdjtZ nq| wbePbi tktl tm,tjv ,btZ nq|

Btj KUibK tfwUs tgukb GiKg tKvBv mgm`v tbB- hviv tfvU t`te Zviv mivmvi tgukb
tevZvg tPt c tfvU t`q Ges wbePbi mgq tkl ntj gntE® gta` djvdj tei ntq hvq|
tZgivi tB Lp Lpk nte Avgt`i t`tki AtpK ,iZpYwbePb GB Btj KUibK tgukb w`tq
Kiv`ii"ntq tMtQ|

`j MZ KvR
tZvgv`i Kvrm `jU`j `Zwi Kti Btj KUibK tfwUs tgukb e`envi Kiti Kx mjev Ges Kx
Amjev tmlU wbtq GKwU weZtK® AvtqvRb Ki |



bZp wLjvg : tUvbi , Btj KUibK tfwUs tgukb |

fvpqj Awdtmi mefPtq PgKc0 mjetai K_vUv GLtbr ejv nq w| maviY Awdtm hviv KvR Kti Zv`i tK Awdtmi KvQvKwQ _vKtZ nq| fvpqj Awdtm thtnZi KvDtk mkixti _vKtZ nq bv ZvB Zviv thLvfb Bt"Q tmlvfb _vKtZ cvti | KvtrB GK Awdtmi GtKKRb nqtZv GtKK kni _vtK| mwZ" K_v ejtZ Kx AtbK AwdtmB wKSy Gfvte KvR Kti | cwxUv thtnZi Zvi Atji Dci Nti ZvB GK t`tk hLb w`b ZLb cwx _exi Ab` cto ivZ| w`bi tejv nqtZv GK`j Awdm Kti NgvtZ tMj, ZLb cwx _exi Ab` cto Ab` `j Ng t`tk Dtv KvR `i" Kti w`j! hvi A_ AwdmUv PweYk NvUv Pj tQ|



AtbK Zi"Y Zi"Yx AvRKvj Awdtm wltq `kUv cuPUv KvR bv Kti - Zvi wtrRi Nti etm `xvxfvte hLb Bt"Q KvR Kti |

AvRKvj Kj tmUvi etj c0qB GKUv K_v tkvbr hvq- Avgvt`i t`tki Kj tmUvi emvtrvi KvR Pj tQ| bvbv aitbi Kj tmUvi _vKtZ cvti - Zviv bvbv aitbi KvR Kti - GKUv mnR D`vniY ntZ cvti, tmlU tKvtr GKUv tKv`uvbxi KvQ hviv bvbv wKQyRvtZ tdlv Kti Zv`i c0k0 DEi t`qv| aiv hvK tKD GKUv KvwuDUvi wKtbtQ- tmB KvwuDUviUv wbtq Zvi GKUv mgm`v ntqtQ ZvB tm KvwuDUvti tKv`uvbxtZ tdlv Kij | tm nqtZv fvetQ Zvi tdlvbi DEi w`t"Q Avkcvtki tKvtr GKRb gvbj - Avmtj tmB tdlvU nqtZv Pj GtmQt cwx _exi Ab` c0s-tKvtr GKwU Kj tmUvti | tmlvfb hviv AvtQ Zviv GB c0k0 DEiUv Lp fvtrv Kti Rvtb KviY Zvi KvQ AvtM nqtZv Avtiv AtbK gvbj GB c0kU KtiQt- ZvB Lp mntRB Kj tmUvi t`tk DEi w`tq tmB gvbj wUtK Ljk Kti w`j |

`j MZ KvR
tZvgv`i `tj GKwU fvpqj Kmi"g`Zwi
KtZ ntj Kx Kx KtZ nte tmlU wj L|

Avgvt`i t`tki AtbK Zi"Y-Zi"Yx AvRKvj Awdtm wltq `kUv cuPUv KvR KtZ Pqv bv- Zvi wtrRi Nti etm `xvxfvte hLb Bt"Q

KvR Kti | Zv`i KvtrRi t`TtU ZLb Avi wtrRi kni wKsev wtrRi t`tki gvtS AvUtK _vtK bv, ZLb tmUv ntq hvq mviv cwx _ex| Zviv `iayth KvR Kti Avb` cvq Zv bq- AtbK UvKv DcvR0 KtZ cti | GZ wKQ0i Rtb` Zvi `iKvi `iayGKUv KvwuDUvi Avi BvUv tbtUi msthvM| Aewk` Zvi mvf_ Avtiv GKUv wRvbm `iKvi - tmUv nt"Q tclMngstq `qjZv!

KvtrB tZvgiv eStZB cviQ bZb cwx _extZ GKmvf_ wgtj AtbtK KvR KtZ ntj Zv`i tK Avi GK RvqMvq etm KvR KtZ nq bv| GB th eBUv Zng coQ- Zng wK Rvb hviv GB eBUv wj tLQt, mwrQtQt Zviv tKD KLtbr GKmvf_ etm wv- mevB wtrRi Nti etm KvR KtiQt|



bZb wKjvg : fvpqj Awdm, Kj tmUvi, KvMRwenxb Awdm|

cW 5 : Kgĭĭĭĭ Zĭ I thMvthM cĥy³

tZĭgĭv wĭĭqB Rĭb eĭsjĭĭ k GLb wekĭj wekĭj RĭnvR ĭZĭi Kĭi cW_exi eo eo tĭĭk i Bwĭb Kĭi | Avgĭĭĭ i GZ myĭ i tĭkĭi tĭZĭi wĭĭq wekĭj wekĭj bĭx wĭĭqĭQ- GB tĭĭkĭi gĭbĭj bĭx wej mgĭĭeo nĭqĭQ- KĭĭRB Zĭiv th PgrKĭi tĭĭKĭi Avi RĭnvR eĭbvĭZ cĭĭte ZĭĭZ AevK neĭi Kx AvĭQ?



BŬw=ĭqj tĭveU wĭĭq AvRKĭj wec³/₄bK hwĭĭK KĭR Kĭv nq|

tZĭgĭv ĭĭĭb Lĭk nĭe- Gaiĭĭi wec³/₄bK KĭR,ĭjv AvĭĭĭB Avĭĭĭ Avĭĭĭ gĭbĭj wĭĭR bv Kĭi tĭveUĭĭi ĭwqZĭi wĭĭq wĭĭQ| gĭbĭĭĭv KĭR KĭĭZ KĭĭZ Kĭĭ- nĭq hwq- GKĭĭNĭq KĭR nĭj KĭR KĭĭZ BĭĭQI Kĭi bv| tĭveUĭv Kĭĭ- nq bv| GKĭĭNĭq KĭRĭw wĭĭq Zĭiv KLĭĭv AwĭĭthMĭ Kĭi bv| ZĭB cW_exi eo eo KĭKĭi Lĭbvq kĭĭK wĭĭmĭte Avi gĭbĭj tĭB| KĭR Kĭi tĭveUĭv- gĭbĭĭĭv eo tĭRĭi tĭĭL KĭRĭw wK gĭZĭv nĭĭQ wK bv!



WĭBĭvi QvovB GB Mĭox Pĭj vĭbv hwq|

GKĭĭNĭq wec³/₄bK KĭR,ĭjv gĭbĭj tĭĭK tĭveUĭv AĭbK ĭĭĭjĭĭte KĭĭZ cĭĭi - KĭĭRB hZ wĭ b hwĭĭQ ZZB GB KĭR,ĭjv gĭbĭĭi eĭĭj tgĭkĭĭv KĭĭQ- Zĭ cĥy³ eĭĭvi Kĭi |

eo eo RĭnvR eĭbvĭZ nĭj wekĭj wekĭj avZe UKĭĭĭĭK wĭwĭ B AvKĭĭi tĭĭU Zĭici Iĭqĭi s KĭĭZ nq| tZĭgĭv wĭĭqB cĭ_NĭĭU tĭvKĭĭb Iĭqĭi s KĭĭZ tĭĭLQ| tĭmLĭb tĭĭK th ZxeĭAvĭĭv tei nq tĭKD hw tĭmĭRĭmĭR tĭmĭĭK ZĭKĭvq Zĭvĭĭj Zĭi tĭPĭL cĭKĭvĭKĭĭĭte ĭĭwZMĭ- nĭq hwĭte| hwĭv Iĭqĭi s Kĭi Zĭĭi weĭkĭ Pkgĭv cĭi KĭR KĭĭZ nq| tĭmLĭb cĭĭU Zĭĭci mĭĭ nq, avZe UKĭĭv wQUĭK wQUĭK cĭo| KĭRĭw tĭĭLB gĭb nq Gĭw tek wec³/₄bK KĭR| GB wec³/₄bK KĭRĭw hwĭ gĭbĭĭĭK KĭĭZ bv nĭZĭv- tĭKĭĭv GKĭv tĭveU KĭĭZĭv- Zĭvĭĭj tĭKgb nĭZĭv?

Avgt`i ct_ NvtU cōZw`b KZ GKmtWbU nq- tgvUvgvU Abgvb Kiv hvq Avi KtqK`kK ci GKmtWbU eÜ ntq hvte- KviY ZLb Mmo Avi gvbfliv Pjvte bv| Mmo Pjvte Z_ chv³ e`envi Kiv hšç| Mmo i tejvq tmUv`i i` ntZ GKUz`wi nt`Q- AvKvk ct_ tmUv wKšç Gi gvtS`i i`ntq tMtQ| vekvj vekvj tclb`hLb AvKvk Dto ZLb cvBjU`i i` wKQyKiZ nq bv- KwæúDUvi B meiwKQyKti| hyswvgvb th,tjv AvtQ tmLvfb AvRKvj cvBjU`v tKB bv, cvBjUvenxb tWbiv th cōZw`b hys KiZ tevgv tdjtQ tmUv tZv Letii KMR Lj tjb t`Lv hvq|

Avgt`i KvRi tŋtŋ Z_ chv³ tKgb Kti e`envi nq Zvi Zvj Kv KiZ tMtj tmUv tkl nte etj gtb nq bv| `vBwi K wPwCt thvMvthvMi K_v tZv AvtMB ejv ntqtQ- Awdtmi wgvUs,tjv AvRKvj Ab`fvte nq| wewfbæ Awdtmi wewfbæ gvb| Avjv`v Avjv`vfvte etm etm GKmt_ KbdvtiY Kti tdjt! Avgt`i



tKvfbv cvBjU QvovB GB tclwU AvKvk Dto|

t`tkB wekle`vj tq B-Kvmitg`Zwi nt`Q, GKRb wKŋK Zvi Kvmitg covteb, mviv t`tki

`j MZ KvR
tZvgv`i` tŋ GKwU fvPŋvj Kvmitg`Zwi
KiZ ntj Kx Kx KiZ nte tmUv wj L|

AmsL` gvb| Zvi KvQ cotel Awdtmi e`e`vcbv Z_ chv³ Qvov KíbvB Kiv hvq bv| AvtM Awdtm eo eo dvBj GK Ni t_tK Ab` Awdtm thtZ w`b cvi ntq thtZv- bZb

BtjKUwbK dvBj tPvLi cjtk GK Awdm t_tK Ab` Awdtm Ptj thtZ cvti| Awdtmi metPtq ,iZpY©KvR,tjv nq UvKv cqmv ev GKvDwUs mspvš, Z_ chv³ i KviY tmB KvR,tjv GLb Avi gvb|tk KiZ nq bv- eo eo tj Rvi LvZvq gv_v MŋR wKQyvj LtZ nq bv, KwæúDUvi gŋtZ©meiwKQyKti tdjt|

gvbfl i KvRi RvqMvq memgtqB KvDtk bv KvDtk wKQy GKUv ejtZ nq, tevsvtZ nq, tmvgbvi w`tZ nq| Gme KvRi Rtb` GZ PgrKvi e`e`v tei ntqtQ, GZ my`i Kti meiwKQy Kti tdjv hvq th gvtS gvtS gtb nq AvtM GB KvR,tjv tKgb Kti Kiv ntZv?



bZb wKljvg : tiveU, cvBjUvenxb tWb, B-Kvmitg

cŭV 6 : mgvR Rxeťb Z` thMvťhM cŭy³

mgvR³ m³uK³Db³AvBimU : Avgv³ mevB mgvR³ _wK| Z³g, tZv³gi eŬj³v nq³Zv tK³ťbv M³g ev kn³ťi _vťK³| tZv³g³ť i g³ťa³ tKD tKD nq³Zv³ <ť i tnv³ť³ť³ _vťK³| e³ev, gv, `v`v, `v`x, AvZ³q³^Rb, eŬj³vŬe Ges ew³K mevB³ťK w³ťq nq Avg³ť i mgvR³| GLvťb tKD Pv³Kwi K³ťi, tKD e³env K³ťi, tKD w³K³Ŭ³Ŭ, tKDev ev³mq _vťK| me³vi g³ťa³ c³vi³ c³wi³ K m³ack³Avi t³ lqv³-ťb lqv³ ga³ w³ťq GK³Ŭ mgvR³ G³Mťq P³ťj | mgv³ťRi b³v³b cŭq³vR³ťb Avg³iv b³v³b aiťbi n³wZ³qvi e³envi K³wi | GKmg³q thMvťhM ej³ťZ GK M³g t³ťK Avi GK M³g³ t³ťZ n³ťZv Lei w³ťZ, c³ťi t³ Lv n³ťj t³Xj ew³Rťq³ Lei t³ qv hv³q| gv³Ŭj hLb w³j L³ťZ w³KLj ZLb t³m w³Pw³ w³j³ťL g³ťbi f³ie Avi Lei c³v³ťZ³ i³ Kij | M³ťo DVj W³K w³ef³M, GK R³v³Mv t³ťK Av³ťiK R³v³Mv³ w³Pw³ t³c³ťQ t³ lqv³ e³e³ v³| t³Ŭj M³đ Avi t³Ŭj³ťdv³bi Awe³<vi GB e³vc³vi³ ťj³vťK Avi l mn³R K³ťi t³đj³ťv|

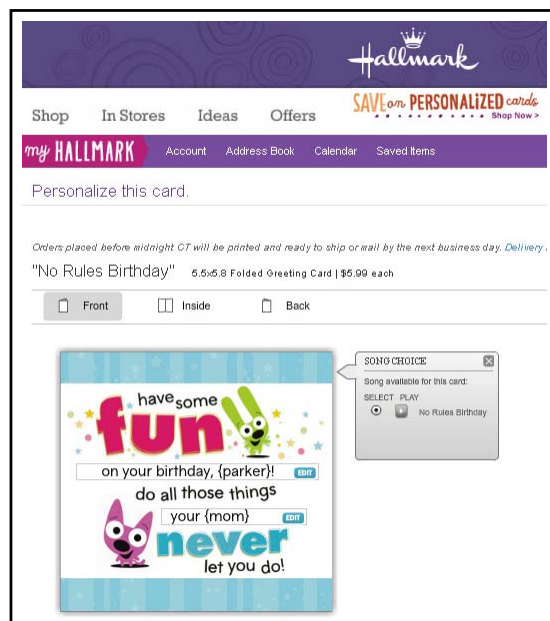
Avi GLb Z` I thMvťhM cŭy³ (AvBimU) mgvR³ P³wn³ v c³ťYi e³vc³vi³ ťj³vťK w³ťq G³ťm³Q n³v³Zi g³ťV³q| AvBimU³ c³Ŭj³ Z n³wZ³qvi³ ťj³vi c³vk³vc³w³K GLb B³Ŭvi³ťb³ťU mgvR³ thMvťhM³ A³ťbK R³b³c³đ l³ťqem³BU ^Z³wi n³ťq³Q hv GB mgvR³ K³g³R³Ŭ mn³R³fv³ťe K³ivi m³ťhM K³ťi w³ťQ|

AvBimU e³envi K³ťi K³xf³ťe mgvR³ m³ack³ťj³ v³w³K³z n³ťQ Z³vi K³ťqK³Ŭ D³ v³ni³Y Avg³iv c³đ³ťg t³ťL t³bB :

K. Ab³Ŭv³bw³ťZ Avg³š³Y : GKmg³q t³Kej K³w³ťRi Avg³š³Yc³Ā Ges t³Ŭj³ťdv³ťbB t³K³ťbv mgvR³ Ab³Ŭv³ťbi B-K³w³Ā³ťbK P³gK³c³đ n³ťZ c³ťi, K³w³MR K³w³j e³envi n³q b³v e³ťj A³ťbK c³wi³ťek ev³Ŭe|

c³vk³vc³w³K B-ťgBj ev g³ťV³ťdv³ťbi L³ť ev³Z³q (GmGgGm) `v³l qv³Z t³ lqv³ hv³q| B-ťgBj ev L³ť ev³Z³q m³jeav³ nj Z³v h³vi K³ťQ c³v³ťbv n³ťQ w³K t³m mg³ťqB Z³ťK t³dv³b e³envi K³i³ťZ n³q b³v, Z³vi m³jeav³Z mg³ťq t³m t³ťL w³ťZ c³ťi |

L. w³ťkl w³ em³mg³ťn i³ťf³Qv ev³Z³q: Z³g tZv³gi eŬj³ť i R³b³w³ b, C³ ev c³R³vi mg³q i³ťf³Qv- ev³Z³q c³v³ťZ P³vl | th³me eŬj³ťZv³gi Av³ťk³c³ťk³ _vťK Z³ť i K³ťQ Z³g tZv³gi n³v³Z ev³ťbv³ K³w³Ā³ťZ c³ťi³v| w³Kš³h³vi³ w³f³b³ť³ťk ev w³f³b³ť³ťZ³ _vťK? Z³ť i K³ťQ³ K³w³Ā³ c³v³ťbv hv³q W³Kťh³ťM Z³ťe GLb me³vB c³v³vq B-K³w³Ā³ B-K³w³Ā³ ťfv³ťe c³v³ťbv hv³q| GK³Ŭ n³ťjv Z³g



wbR KwæcDUvfi B-KW[©]Zwi Kfi tmiU B-
tgBtj cVtZ cvtiv| Avevi BvUitbtU AtbK
B-KvW[©] mvBU AvtQ thLvb t_tK Zvg tZvgvi
cQt`i B-KW[©] tZvgvi wçRtbi KvQ
cwVtq w`tZ cvtiv| GRb` maviYZ tKvfbv
UvKv-cqmv LiP nq bv| tZvgvi eÜyev wçRb
Zv`i BvUitbtUi gva`tg tZvgvi Kw[©]tctq
hvq| Avevi i`f`Qv RvbtbtZI gVtvdvbi
L` evZ[©]GLb AtbK Rbwc| Gi gva`tg Lp
mnR wçRtbi KvQ i`f`Qv, DtØM ev DrKÜv
tcStQ t`lqv hvq| GLb Avevi wewfbæGdGg
tiwI tZ cQt`i Mvb ewRtqI wç eÜfK
i`f`Qv Rvbtbtvi ti lqvR PjyntqtQ| Gmtei
gva`tg mvgwRK eÜb,tjv`p nq|



Qwe msi ¶b Avi weZitYi Rtb` PgrKvi
I tqemvBU itqtQ|



BD wUDte GKw wfiwI |

M. `Z msi ¶Y I wewbgq : AtbKw`b AvtM t_tK
Rxtbi iwOb I ,iZcY[©]Nubvejxi Qwe Ztj ivLv
Ges Zv mevi m½ wewbgq (tkqvi) Kivi GKw
ms`<wZ itqtQ| hv`i mvg_[©] AvtQ Zviv Zv`i
Abpwbw wfiwI K`vtgivq aviY Kfi ivtL| eZgvtb
Ggb tgievBj tdvb mnRj f` ntqtQ thLvb K`vtgiv
GgbwK wfiwI K`vtgivi itqtQ| Zvi dtj Rxtbi
th tKvfbv gynZ[©]AvMvgx w`tbi Rb` msi ¶Y Kfi ivLv
mæe nt`Q| GQrov Gaitbi wWvRUvj Qwe Bt`Q
KitjB wçRtbi KvQ cwVtq t`lqv hvq|

BvUitbtU GLb wewfbæmvBU itqtQ thLvb Zvg Qwe AvctjwW Kfi Zv Ab`t`i RvbtZ
cvi te| Gi Kg mvBU,tjvi gta` Mti wKvmv (picasa.google.com) Ges Bqvüi wdkvi
GLb metPtq tewk Rbwc| tKej Qwe bq, Bt`Q Kitj Zvg tZvgvi tZvjv wfiwI mviwetk
mvgtb Ztj aitZ cvtiv wfiwI tkqwis mvBtUi gva`tg| Gi Kg mvBU,tjvi gta` BDwDe
(www.youtube.com) metPtq Rbwc|

`j MZ KvR
tZvgv`i Kvtmi tKvfbv GKw Abpvtbi Rtb` GmGgGm e`envi Kfi AwZw`t`i AvgšY
RvbtI |



bZb wLjvg : L` evZ[©], B-KW[©], wfiwI tkqwis mvBU|

cV 7 : mgvRK Rxeťb Z' thvMťhM cđy³

mgvRK thvMťhM mi mvBU : Z' I thvMťhM cđy³ Avgvť i mgvRK thvMťhM K'Z, AvKl'xq, Ges KvřKix Kti ZťjťQ| iayG bq, Gi evBťiI bvbvfvťe Avgvť i mgvRK e'vcvi ,ťjv B'UvťbťU DťV GťmťQ| AvťMi cvťV ejv ntqťQ tZvgvi eÜťK tKvťbv wKQz RvbtZ ntj Lť evZ'ev B-tgBj cvťbv KVRu wKš'ťZvgvťK KiťZ nťe| wKš'hw' Ggb



nq th, Z'ug hv wKQz KiQ ZvB tZvgvi eÜjv tRťb hvť'Q, Avjv'v Kti tZvgvi wKQB KiťZ nt'Q bv Zvntj tKgb nq? wđqB LpB fťjv nq| GB wPš'v tťK GLb B'UvťbťU Mťo DťVťQ tekwKQz mgvRK thvMťhM mi m'cy' mvBU| wbtRi fťjv-j'vMv g'j'vMv, Ab'p'bw', P'KwiťZ cđgvkb, mš'bw' i wťq BZ'w' b'bv wťtqi Z', Qwe wKsev w'f'wI w'bwgq Kiv hvq G,ťjvi th tKvB GKw tťK| eZ'vťb cđq kZwaK GiKg lťqemvBU iťqťQ| G,ťjvi gťa' tdmeK (www.facebook.com), Mj c'w (plus.google.com), UBUvi c'w_exi 93 tKwU t'jvK tdmeK e'envi Kti | (www.twitter.com), tRv'av (www.zooppa.com), gvBť'cm (www.myspace.com) G,ťjv LpB Rbw'đ| c'w_exi cđq mKj f'lvf'lv x t'jvK GB mvBU,ťjv e'envi Kti | Gť i gťa' mťPťq te'k e'eüZ nq tdmeK| 2012 mťj i Rb g'v'm c'w_exi cđq 90 tKwU t'jvK tdmeK i e'envi Kvix wQj! evs'vť'ťk l tdmeK i e'envi Kvixi msL'v cđZ'w bB evotťQ| 2009 mťj i RjvB g'v'm evs'vť'ťk tdmeK e'envi Kvixi msL'v wQj gv' 96 nvRvi | 2012 mťj i RjvB g'v'm GwU 25 jvL Qwotťq tMťQ| tdmeK ev Abje mvBU,ťjvťZ cđZ'K e'envi Kvix Zvi c'w wP'wZg'jK GKw wťk l wqZ lťqet'cBR P'vjyKiťZ cvťi b| GwUťK ejv nq e'envi Kvixi t'cđvBj | e'envi Kvix Zvi wbtRi m'úťK w'f'bwZ', Zvi fťjvj'vMv g'j'vMvi wťl q,ťjv BZ'w' Zvi t'cđvBťj c'kvk Kti b| Gici GKRB Zvi t'cđvBj tťK tdmeK Zvi űeÜť' i LťR tei Kti | GLvťb eÜz ejťZ Avgiv c'w'j Zfvťe thUv tevSvB t'Uv tevSvťbv nt'Q bv, tdmeK Ab'jvqx GKRB g'v'bt' l i mť½ Ab' hZ g'v'bt' l i thvMťhM v'Kťe Zviv mevB nt'Q Zvi űeÜť' hw' tZvgvi eÜjv l tdmeK t'cđvBj vťK Zvntj Z'ug ZvťK LťR wbtq eÜjvnl qvi Rb' Abťiva cvťvZ cvťiv| hw' t'm m'š'vZ t'q Zvntj tZvgiv eÜjvntq hvťe| GKBFvťe Ab' tKD hw' tZvgvťK eÜjvnl qvi Abťiva Kti Avi Zv Z'ug Mňv Kti v Zvntj Z'ug l Zvi eÜjv nťe| Z'ug Avi tZvgvi eÜjv wgtj nťe tZvgvi űt'vU l qvK' ev tZvgvi űmgvRK t'vU l qvK' |

GLb tZvgvi tbUI qvK[©]Avt⁻Í Avt⁻Í
eo ntZ _vKte| tZvgvi cöBgwi
`<tji th eÜyUi mvt_ tZvgvi `xN[®] b
f⁻Lv nq bv, th wKbv GLb nqtZv
A[†]÷ij qvZ _vK, Zv[†]KI Zvg GLv[†]B
L[†]R tctZ cv[†]iv| Zvg hLbB tZvgvi
tcödvB[†]j tKv[†]bv Z_ cKvk Ki[†]e
m[†]½ m[†]½ Zv tZvgvi eÜ[†]i tctRi
GKw[†] w[†]etkl RvqMvq t[†]f[†]m DV[†]te| Zvg
tZvgvi g[†]bi f[†]ve cKvk Ki[†]Z cv[†]te
hv t[†]dme[†]f[†]K ð÷`vUvm[†]ö b[†]vtg cwi[†]WZ|
UBU[†]ti GU[†]v[†]K ejv nq UBU! Zvg hw[†] tKv[†]bv Öwe cKvk K[†]iv, hw[†] tKv[†]bv w[†]f[†]Wl mev[†]B[†]K
f[†]-Lv[†]Z Pvl Zv[†]ntj Zv tZvgvi tcödvB[†]j cKvk Ki[†]tjB Zv tZvgvi tbUI qvK[©] mev[†]B f[†]-L[†]tZ
cv[†]te| i[†]ayZv[†]B bq, tZvgvi eÜ[†]i mev[†]B[†]K t[†]dme[†]f[†]K g[†]tb Kwi[†]tq t[†]-te tZvgvi Rb[†]w[†] b K[†]te!



UBUvi w[†] tq msev[†] w[†]ebgq GLb L[†]pB c[†]Pvj Z GKw[†] c[†]xw[†]Z|



mvgwRK tbUI qvK[©]envi K[†]ti w[†]etk[†]i A[†]tbK t[†]-ik MY-Av[†]`vj b
M[†]to tZj[†]v n[†]tq[†]Qj |

wgmi, wj weqvq th mvgwRK wece-n[†]tq[†]Q Zvi t[†]cQ[†]tb GB mKj mvgwRK thMvthv[†]Mi mvB[†]Ui
w[†]etkl f[†]vgKv w[†]Qj etj g[†]tb Kiv nq|

mev[†]B ZLb tZvg[†]tK i[†]t[†]f[†]Qv
Rv[†]btZ cv[†]te| t[†]Kej
tZvgvi e[†]w[†]³MZ m[†]-`tL
bq| GLb GB mvgwRK
thMvthv[†]Mi mvBU[†],tjvi
gva[†]tg c[†]Y[†]i w[†]eÁvcb,
Kv[†]Ri Lei Ggb wK
mvgwRK Av[†]`vj b msMwZ
Kivi KvRI n[†]t[†]Q| 2010-
2011 m[†]tj Avie w[†]etk[†],
w[†]etkl K[†]ti wZD[†]ibw[†]mqv,

`j MZ KvR
t[†]dme[†]f[†]Ki g[†]tZv GKw[†] mvgwRK tbUI qvK[©]envi K[†]ti bZ[†]p Kx Kiv hvq t[†]m[†]W wj L|



bZb wK[†]Lj[†]vg : tcödvB[†]j, mvgwRK tbUI qvK[©] ÷`vUvm|

bgjv cĥe:

1. tKvb Awe®<vťi i dťj bZb tKv_vl āgtYi tġťġ c_NwU wPbťZ mjeav nq?

- | | |
|-----------------|-------------|
| K. KwáDUvi | L. B>UviťbU |
| M. tgrevBj tdrv | N. wRwcGm |

2. wDwUťbv máúťK®mVKfťe RvťZ Avgiv tKvbU e`envi Kie?

- | | |
|-------------|-----------------|
| K. KwáDUvi | L. B>UviťbU |
| M. j`vŮťdrv | N. tgrevBj tdrv |

3. Z` I thMvthM cĥy³ e`envi Kťi -

- i. eB cov hvq
- ii. e`vťKi tjbť`b Kiv hvq
- iii. tMg tLjv hvq

wbťPi tKvbU mVK?

- | | |
|-------------|----------------|
| K. i | L. i , ii |
| M. ii I iii | N. i, ii , iii |

wbťPi Abť`Q`wU cťo 5 I 6 bā`i cĥkē DĖi `vl :

tiev Gevi D`P gva`wgK mwUdťKU cixġlvq DĖYġťqťQ| tm vekĥe``vjťq fwZġťe|
msev`cťġ weÁwBť`ťL GK ivťZ eťmB tm XvKv I Rvrv/2xi bMi vekĥe``vjťq fwZġ Arťe`b
Kťi |

4. tiev fwZġ Arťe`b KťiZ cvťi -

- i. tgrevBj tdrv e`envi Kťi
- ii. B>UviťbU e`envi Kťi
- iii. KwáDUvi e`envi Kťi

wbťPi tKvbU mVK?

- | | |
|-------------|----------------|
| K. i I ii | L. i I iii |
| M. ii I iii | N. i, ii I iii |

5. G aiťbi Arťe`b cĥuqvq cĥB mjeaw` nj Ń

- i. mgq I A_ġmvkġ
- ii. kvixvi K kġ jvNe
- iii. cwiťek msi ġY

wbťPi tKvbU mVK?

- | | |
|-------------|----------------|
| K. i I ii | L. i I iii |
| M. ii I iii | N. i, ii I iii |

6. tiev th cĥy³ e`envi Kťi fwZġ Arťe`b KťiŮj Zvi bvg Kx?

- | | |
|-----------------------------|----------------------------------|
| K. tgrevBj cĥy ³ | L. Z` I thMvthM cĥy ³ |
| M. B>UviťbU | N. KwáDUvi |

7. 6 bā`i cĥkē th DĖiŮ Zvg cĥ` KťiQ tm DĖiŮ cĥ` Kivi KviY ĥy³mn e`vL`v Ki |

.....

W0Zxq Aa"vq

KwpuDUvi msuké hšcwZ



GB Aa"vq tkłł tZvgiv :

1. KwpuDUvıı wewfbahšystki Kvhewj eY0v KiłZ cvi ęe
2. KwpuDUvıı wewfbahšystki cvi ıımi K mpuKevLıv KiłZ cvi ęe
3. KwpuDUvıı wPı GđK Gi wewfbahšcwZ wPıyZ KiłZ cvi ęe|

cw 8 : Bbcj wfvBm

lô tkôytZ tZigiv AvBimUôî wefbehšcwZ mûK®tRtbQ| G cvtV AvBimU hšcwZ mûK®Zvgiv Avtîv we-Íwi Z RvbZ cvite|

mgiti mvt_ G hšcwZ,tjv µtgB Avtîv AvaybK ntq DVtQ| weiqUv GLb Ggb `wotqtQ th, AvRtKi metPtq AvaybK hšUB AvMgxKvj cjtîv ntq hv"Q| ZvQov bZb bZb Awe®<vi tZv AvtQB| tUwjwfkîbi wigtvU KtUj hšUi K_vB atîv Ñ AvMgxZ Ggb tUwjwfk b cvlqv hte thUv gLi K_vtZB Pjete| itb AevK ntj? K_v etjB GLb Bbcj t`lqv mæ| wigtvU KtUj hšU nqtZv GtZ APj ntq cot| cñ³ Lp `Z e`tj hv"Q| tZigiv hviv GLb mBg tkôytZ cotQv Zviv GKUz Dctii tkôytZ thtZ thtZB GB hšcwZ,tjvi AtbK,tjvB hv`Ntîi mvgMôZ cwiYZ nte| Zey eZgfb cñj Z hšcwZ,tjv mûK®Avgv`i RvbZ nte| KviY hšcwZ,tjv cvtë tMtj l Bbcj, t-vtîR, cñmms Ges AvDUcUî avi YvUv wKšvcvte hv"Q bv|

Kx tevW®(Keyboard): KwáDUvî Bbcj t`l qvi cñv (euj e`eüZ) hšînj Kx tevW® Z_ l thvMthvM cñ³ i AwaKvsk htšîmaviYZ Kx tevW® gva`tg Bbcj t`l qv nq| G mKj hšK w`tq tKvîv KvR KivZ PvBtj hš,tjvK wKQzwb`Rbv w`tZ nq| Avgiv Kx tevW® tevZvg tPtç G wbt`Rbv,tjv htšî gta` cñek KivB| ZLb hš,tjv Avgv`i Pvlqv Abhivx KvRvU Ktî t`q|

AvRtKi w`tbi AvaybK KwáDUvi Kx tevW® aviYv GtmQtQ UvBcivBUvi bvtgi GK aiîbi hšî t`tK| Kx tevW®maviYZ eY®, mSL`v ev wekl wKQz wPy mwi e`vite web`Í _vtK| KwáDUvîi Kx tevW®vBc ivBUvîi Kx tevW® gtZv ntj l wekl KvRi Rb` wKQzAwZwi³ Kx _vtK| Kx tevW®maviYZ BstîwR fvlvq ntj l Ab`vb` fvlvi Kx tevW® cvlqv hvq| mûZ evsjv`k mi Kvi Avg`wbKZ mKj tgvevBj tdtîbi Kx tevW®evsjv tj AvDU hv³ Kivi GK wbt`Rbv Rwi KtîQtQ|



KwáDUvîi Kx tevW®

gvDm (Mouse): tZvgiv Gi gta" vbÖqB gvDm
bv'tgi GKwU hš;e'envi Kti td'tj'Qv| GwU GKwU
Rbw'cQ Bbc'j wWfvBm| GtK A'tb'tK ctq'wUs
wWfvBmI etj _v'tK| hviv c'lg GwU ^Zwi Kti'tQ
Zv't' i aviYv wQj GwU t' L'tZ Bti'ti g'tZv, ZvB Gi
bv'g t' qv ntq'tQ gvDm|



gvDm

gvDtm maviYZ `wU evUb I GKwU `Ej Pµ (ûBj)
_v'tK| Kiv'úDUv'ti Bbc'j c'ek Kiv'tZ G evUb,tjv
w'wfb'v'te e'eüZ nq| eZ'g'v c'w'extZ A'tbK
ai'tbi gvDm c'w'j Z Av'tQ| maviY e'envi Kiv'wMY ÷ v'ÜW'gvDm e'envi Kti |

Kiv'úDUv'ti g'w'U'ti c'`Q gvD'ti Ae'`vb t' Lv'tbv nq Zx'ti djvi g'tZv GKwU ctq'Uv'ti i
gra'tg| gvDmU boiPov Kiv ntj ctq'Uv'wU Ae'`vb c'w'eZ' Kti | gvD'ti evUb w'KK Kti
Kiv'úDUv'ti K w'wfb'v't' R c'v'b Kiv nq| w'P'w'f'w'EK Acv'ti'wUs w't' ÷ tg gvD'ti e'uj e'envi
j 'q Kiv hvq| maviYZ w'v'`B tc'w'w'tgi w'P't'yi (AvBK'tbi) Dci gvD'ti ev'g'w' t'Ki evUb
G'Kevi w'KK Kti'tj tc'w'w'g'wU w'be'w'P'Z (w'tj±) nq Ges cici `Z `j'vi w'KK Kti'tj tc'w'w'g'wU
Pijynq| j `vc'Uc Kiv'úDUv'ti UvPc'`w w'tq gvD'ti KivR m'v'v' b Kiv hvq|



gvB'tµv'tdvb

gvB'tµv'tdvb (Microphone) :

GwU GKwU Bbc'j hš;|
Av'g'v't' i K_v, Mvb ev th
t'Kv'tbv ai'tbi kã Gi gra'tg
Kiv'úDUv'ti c'ek Kiv'tbv
hvq| w'et'kl Kti B'Uv'i'tbU
w'f'w'EK thvMvthv'tM K_v ejvi
t'q't' t' Gi Rbw'cQZv j 'q Kiv
hvq| t'Uw'j t'dv'tb e'envi Kiv

nq etj G hš;U'i Aw'e'v'i tek Av'tMB ntq'tQ| Z'te GLb GUv'tK w'bq'w'g'Z'v'te Kiv'úDUv'ti
Bbc'j w'tm'te e'envi Kiv nq| K_v ejv Q'ovl f'tqm w' KM'v'k'tbi t'q't' gvB'tµv'tdvb
e'envi Kiv ntq _v'tK|

- `j MZ KvR
1. GLv'tb D'tj L-Kiv nq'w Ggb KZ,tjv wWfvBm th,tjvi K'x'teW'Av'tQ tm,tjvi bv'g
w'j t'L Dc'`vc'b Ki |
 2. c'w'Z'K `tj i Dc'`vc'bv t'`tK GKwU Aw'f'be'Z'w'j Kv `Zwi Ki |



bZb w'K'Lj vg : `g Pµ (ûBj), AvBKb, f'tqm w' KM'v'k'kb, gvB'tµv'tdvb|

(Kwc) KiZvg| wKš-G cōZwj mc hZevi `iKvi ZZeviB
tgukb e`envi KiZ nZv| Z_wU msiwZ _vKZ bv| G
mgm`wUj mgvavb th hšU Kti w`tqQ Zvi bvg `čvbi |
th tKvbn cKvi Qwe, g`Z ev nVZ tj Lv tKvbn WKtgu
A_ev tKvbn e`i wWvRUvj cōZwj mc `Zwi Kivi hšj
bvg `čvbi | G wWvRUvj cōZwj mc wefbae cKvii Z_
dvBj AvKvfi KwúDUvfi msiY Kiv hvq|



`čvbi

I GgAvi (OMR): I GgAvi Gi cYPe n`Q AcwJK`vj
gvK`i Wvi (Optical Mark Reader) GwU GKw Bbcj wWfvBm|



`čvbi

Avtj vi cōZdj b wePvi Kti GwU wefbae iZi Z_ ešZ cvfi | I GgAvii KvRi aib
AibKwUv `čvbi i gtZv| wekl fite `Zwi Kiv wKQz`m ev wPy I GgAvi cotZ cvfi |

eZg`tb GwU AibKi KvQB Lp cwiwPZ| wekl Kti eūbePwb cōkē DĖicĭ hvPvBtq
GwU e`vcK e`envi itqQ| mwK DĖii eĖUj Ae`vb KwúDUvi tK AvM t`KB Rwbtq
ivLv nq| wK`v_xPv mwK eĖ fivU Kitj b`f tctq hvq| Ab`vq b`f cvl qv hvq bv|
mwKwUmn GtKi AwK eĖ fivU Kitj I b`f cvl qv hvq bv| Gi gra`tg Kg mgtq AibK
DĖicĭ gj`vqb Kiv hvq| GQvov gj`vqb fj ev c`cwZZi nI qvi tKvbn m`bevb tbB|
ZvB GwU AZ`š-Rbwcĭ|

`j MZ KvR
1. GLvfb D`j L-Kiv nqwb Ggb KZ`tj v wWfvBm th`tj vi K`vtg iv AvtQ tm`tj vi bvg
vj tL Dc`vcb Ki |



bZb wKlj vg : `g Pμ (ūBj), AvBKb, f`qm wi KMwbkb, gvBtμvtdvb|

civ 10 : t g t g w i l t ÷ v t i R w w f v B m

Iô tkôvîZ tğtgwi I t÷vîR wWfvBm mæutK©Avgiv AþbK wKQz tRþbQ| GLb G,tjv
 mæutK©Avîv GKUzwe~vwi Z Rvbe| GLbKvi w`tb KivúDUvi ev tğvevBj tðvb Qvovl cðq
 mKj cKvi cðy³ cîY'B tğtgwi I t÷vîR wWfvBm e`envi nt`Q| AvaybK cðy³wbFp
 mKj cY'B gvBtµvcðmmi Øviv cwiPwij Z nq| G gvBtµvcðmmiþK Pvj bv Kivi Rb` wKQz
 wb`Rbv w`îZ nq| G wb`Rbv,tjv Rgv Kti ivLvi Rb` tğtgwi ev t÷vîR wWfvBtmi
 cðqvRb nq|

KvR Kivi tġtġwii (Memory) AZŠ- iZcy tġtġwii β cKvi | cāvb ev cōwgK tġtġwii Ges mnvqK tġtġwii | tK`xq cōqvKiY BDnbU ev wmcBD hLb Z_ cōqvKiYi KvR Kti ZLb cōqvRbxq Z_ tġv ev mdUlqvi cāvb tġtġwiiZ Ae`vb Kti | cāvb tġtġwii MwZ AZŠ-tenk nL qvq GwU wmcBDi mv_ Zvj wqwj tq `Z KvR KitiZ mġq nq |

8 weU = 1 evBU Memory Ges AbwU ig
 1024 evBU = 1 wKtj vevBU ROM ev Read only
 (1024x1024) evBU = 1 toMvevBU Memory

cāvb ev mnvqK tḡḡwii
 1lgZv `ḡfṽte cKvk Kiv nq|
 GKwU nṽ"Q G MwZ hv nvUR ev

Hizmet Ab'ın n'ın ari Y 1997'de evBU(Byte) 0'ın c'ın K'ın n'ın GK evBU mgvb 8 weU, 1024 evBU th'nZi1000 Gi Lp K'ınQ'ınK'ınQ'ın t'mR't'ın G'tK GK 1024 evBU ej v n'ın

i`vg (RAM) : AvBimiU cY` Z_v
Kw`úDUvi ev `§U`dv`bi
gv`vi`ter`W`P mv`_ i`vg mshy³
_v`tK| c`momi c`vgKfvte i`vtg
c`qvRbxq Z`_ Rgv Kti| c`momi
i`vg t`_tK Z`_ wbtq

Z_ c0qvRvZ Kti | c0mmi
i_vtgi th tKvrbv RvqMv t_tK
mi vmwi Z_ msM0 Kti etj GtK



bvbv ai tbi i vg

Random Access Memory ev mst¶t RAM ej v nq| GLbKvi w`tb c¶mmti i ¶lgZv
thgb tetot0 tZgwb mdUl q¶vi t¶v AtbK Kv¶Ki Ges R¶Wj ZvB G¶t¶K tgtgwi i
AtbK eo Ask e¶envi Ki tZ nq| tmRtb` GLbKvi Kw¶DUvi t¶vi Rb` Kgc¶¶ 2

MMvevBU ev Zvi tPtq tewk tğtgwi `iKvi nq| cmmti i MmZi mv_ cvj v` tğ i`v`gi MmZi GLb A`bK|

GLv`b GKwJ weiq tZvgv`i Rvbn _vKv GKvš-cqRb- i`vg-G Z_ _vKv bv _vKv we`jr cēvni Dci wbfPkj | we`jr cēvni eÜ Kti w`tj Gi mg- tğtgwi g`Q hvq| A_ KpúDUvi PvjyKtj B i`vg cqRbxq Z_ msiY KtjZ _vK| Avevi KpúDUvi eÜ Ktj i`vg Z_`kY` n`q hvq|

ig (ROM) : ROM ev Read Only Memory gr`vi tevWp mv_ mshp _vK| AvBimwJ hšcwZ ev KpúDUvti nWp`vi mPj iLv i Rb` wKQz w`Rbv cqRb nq| G w`Rbv` tj v Qvov KpúDUvi PvjyKiv hvq bv| ZvB ig G w`Rbv` tj v`vqxvte msiwZ



ig



_vK| we`jr _vKv bv _vKvi Dci GB tğtgwi wbfP Kti bv| e`enviKvixl we`kl e`e`v Qvov GwJ g`Q tđjZ cvti bv| G tğtgwi i`aycv Kiv hvq etj G`K ROM ev Read only Memory etj | th`nZi we`kl e`e`v Qvov G tğtgwi tğvQv ev bZb Z_ msthvRb Kiv hvq bv ZvB G`K`vqx tğtgwi etj |

`j MZ KvR
i`vg I ig bvtg`vUv`j MVb Kti KpúDUvti i t`t` tKvbwJ i`ZpY`G
wel`q weZK`Ki |



bZb wKlj vg : gvBt`vvcmmi , evBU, weU|

cV 11 : tğtğwi I t÷vfi R wfvBm

nWV~ (Hard Disk) : tZvgiv hviv KupúDUvi e'envi KtiQ Zviv wōqB nWV~i K_vl tRtb tMtQv| KupúDUvfi tLv v dvBj nWV~ Rgv Kti ivLv nq| Gw Avmtj Z_ msiŋŋYi cāvb hšj| IBM tKvúvbx 1956 mvtj tğBbtđg I wgvb KupúDUvfi Wwv msiŋŋYi Rb cōg nWV~i e'envi Kti| AvBmwU hšj tji AbZg ^enkó ntv Gt i



ig

Z_ msiŋŋYi ŋgZv| AvRtKi KupúDUvi tjtZ mvaviYZ 500 wMvevBU t_tK 4 tUivevBU Z_ aviYŋgZvi nWV~ j wvbtv _vK| GgbwU mvaviY tğvevBj tdvbtbi Z_ aviY ŋgZvI wMvevBtU wbaŋY Kiv ntq _vK| wKšytZvgiv i bti AveK nte 1980 mvtj 1 wMvevBU Z_ aviY ŋgZvməubəvWV~i AvKvi wQj GKw eomi tiwdRvtiUi ev wdRi mgvb| Avi Gi `vgI wQj AtbK! cōZ tğMvevBtUi Rb cti nRvi Wjvi ev evi j vL UvKv LiP Kitz ntZv| gtb KiQ Mj Mí| wKšyGUvB ev—e! GLbKvi nWV~ tjt v cōg ntZi gtvvq GtU hvq|

mvaviYZ nWV~ KZ tjt v PvKwZ _vK hv`i cUvi ej v nq| cUvi tjt v A'vj wgvbqvq Gj q ev KvP ev wmiwgtKi PvKwZi Dci cvZj v Pp^Kxq c`vt_P Av—iY w`tq ^Zwi nq| GB Pp^Kxq c`vt_P DciB Z_ msiŋŋZ _vK| nWV~ Pvjyntj GB cUvi tjt v Njtz _vK| NYŋqgvb PvKwZ tjt vi ms`utk nWV~i tjt Lv/cov (Write/Read) tnWwU Gtj tm cUti Z_ msiŋŋY A_ev Z_ cto Avgv`i cōk Kti|

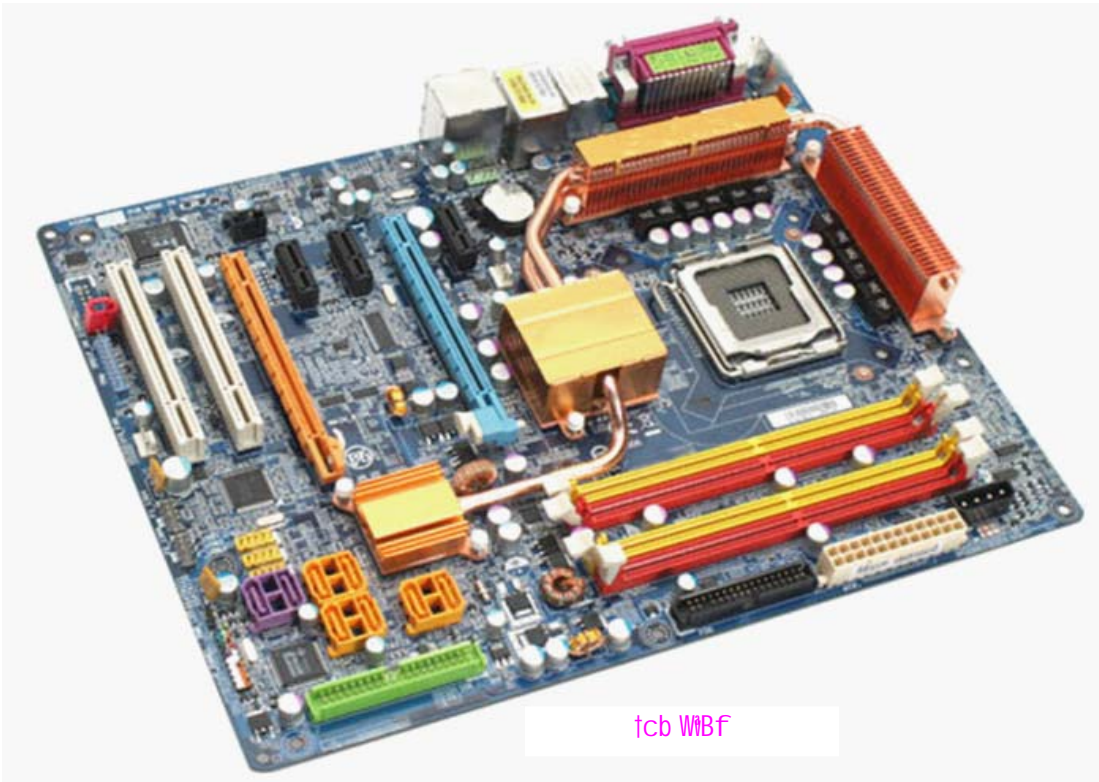
Z_ aviYŋgZvi Kvitj nWV~ AZ`š-Rbwōq| Gw `ŋaitbi ntq _vK| GKw KupúDUvfi i mvt_ `vqrvfete mshy Ae`vq _vK| AbwU Avjv`vrfete _vK| GtK G· Uvib`vj nWV~ etj Gw USB tcvtUP gva`tg thtKvbtv KupúDUvi ev j`vcUtci mvt_ msthvM w`tq KvR Kiv hvq| dtj wecj cwi gvY Z_ GK `vb t_tK Ab`T wbtZ GLb Avi məúY KupúDUvi wv wbtq i ayG· Uvibtj nWV~ wv wbtq tMtj B nq|

wmw/wvfwV (CD/DVD) : wmw ev wvfwV tZvgv`i AZ`š-cwi wPZ| mevB G tjt v t`tLQ| Gi mrvnt`h Kxfvte isabyt`Lv hvq Zv tZvgiv lō tkŋtZ ctoQ| wmw ev wvfwVi wbtPi w`tK GKw cvZj v A'vj wgvbqvgti cvZ _vK hv `ycvfk cwj KvefbU cww-K Ōviv mji wŋZ _vK| wmw ev wvfwVtZ Z_ ivLv ev cv Kitz tjt Rvi ink` e'envi Kiv nq| wmw ev wvfwV Wbtfi tnW Avmtj tjt Rvi weg ^Zwi Kivi hšjQrov Avi wKQB bq| G tjt Rvi weg A'vj wgvbqvgti cvtZ Z_ msiŋŋY Kti| cti Avevi hLb Z_ e'envi Kivi cōqvRb nq

cvW 12 I 13 : gr`vi teW©

gr`vi teW©tZvgv`i AZ`š-cwi wPZ kã| BtZvgta` gr`vi teW©QweI t`tL tdtj Q| Zey gr`vi teW©mútk©Avti v Rvbr cčqvRb| th tKvrbv Btj KUibK hš;tZvgiv hw` Lj t`L Zvntj GKUv teW©meri bRti cote| G teW©Avmtj GKwU wčUW mmiK teW©G teW©cčq mKj cčqvRbxq hšysk msthvM t`lqv _vtK| G teW©hšysk,tjvi gta` Avš-tthvMsthvM Qovl we`yr cčvn eRvq ivtL| G aitbi teW©Avevi nlqvi cte©Zvi w`tq hšysk,tj vtK msthvM t`lqv cčqvRb ntZv| tm GK t`Levi gtZv w`lq wQj !

KwúDUvti i GB gr`vi teW©tgBbteW©, wmt÷g teW©Avevi w÷f Rełmi A`vtcj KwúDUvti i t`tL j wRK teW©bvtgI cwi wPZ| th bvtgB WvKv tnvK bv tKb, GUV nt`Q



KwúDUvti i cčmmti i mv`_ Ab`vb` Bbcj, tgtgwi, AvDUcU ev t÷vti R wWfvBmmn mKj hšcwZi msthvM i t`lvi teW©

GKmgq gr`vi teW©cčmmi ev wmicBD mtkU Qovl wfwI Kw©,mvDÜ Kw©,i`vg BZ`w` j vMvbi t`-ev mtkU Aek`B t`Lv thtZv| Zte B`vbx Kvij i gr`vi teW©i`vg Qov Ab`vb` Kw©(Built in) t`vqfvte msthvMZ Ae`vq _vtK| GtZ Kti KwúDUvti i wbgY e`q AtbK Ktg tMtQ| ZvQov cčmmti i t`lqv w`xi Kvity AtbK hšystki KvR cčmmi wbtRB Kti _vtK| gr`vi teW©AZ`vek`Kxq Ask nt`Q mnvqK wPctmU (Chipset) hv


mmicBD-Gi mvt_ Abvb" hšcwZi Kvhpq mgšq Kti _vtK| gv`vitevtWp KvR Kivi
 ¶gZv I ^ekó" G wPctmUi DciB wbfP Kti | A_¶ gv`vitevtWp tKvb aiþbi cmmi
 e`envi DcthmM Zv G wPctmUi wfwEtZ wba¶ Y Kiv nq|

GKwU AvaybK gv`vitevtWpAbvb" hšystki mvt_ mvaviYZ hv hv _vtK tm,tj v ntj v :

1. gvBtpvcfmmi ev mmicBD mtkU
2. i`vg ˉH
3. wPctmU
4. i g
5. KK tRbvti Ui
6. G· cvbkb ˉH-Ges
7. cvl qvi msthM ˉH

GQvovl eZgvtb gv`vitevtWp mvt_ BDGmte (USB) tcvU, tbUI qmKs KwW I tcvU
 BZvw I msthmRZ Ae`vq _vtK|

`j MZ KvR
 GKwU cyþbv bó KpúDUvi Ltj gv`vi tevWp j ¶ Ki Ges Gi ^ekó"mgn eYþv
 Ki |
 *Kgct¶ GKwU tkw Kvhpq G KvtrI Rb" eivl KiþZ nte|

 **bZb wLj vg :** wcuUW mmKp tevW, Bil t in, Chipset, i`vg ˉH, KK
 tRbvti Ui, G· cvbkb ˉH, tbUI qmKs KwW

cvW 14 : c0mmi

tZvgv` i tK hw` c0Kiv nq kixti i metPtq , iZcY[©]A½ tKvbu- c0q mevB ej te gw[®] | KviY Avgv` i gw[®]-t[®]< i wbt` fkb Ab`vb` A½-c0Z`½ KvR Kti _vtK | tZgwb KivúDUvi , tgevBj tdlv ev G aitbi AvBmU WfvBm,tjvi metPtq , iZcY[©]Ask ntjv c0mmi | GtK wmcBD (CPU) ev tK`iq c0uqvKiY AskI ejv nq | GLbKvi w`tb Mwó, K`vtgiv, tgevBj tdlv, tMg Kbttmj , tUvj wfkbn me aitbi nvBtUK hšcwZB c0mmi wbcvšZ |

AvRtKi `wqvi metPtq AvaybK c0h^³ ntjv G c0mmi | Aw[®]vi nlqvi ci t_tK Gi Dbq b ntqt0 AZ`š-`*ZMwZtZ | ejv hvq AKíbxq MwZtZ | gRvi e`vcvi ntjv c0mmti i Dbqtb c0mmti i B mrvh` tbi qv nq | ZvB ejv hvq c0mmi wbtRB wbtRtK c0ZwbqZ DbZ Kti Mto Zj tQ |

AmsL` BwUtM0UW mwK0 (IC) w`tq c0mmi `Zwi nq | AvBm,tjv `Zwi nq UibwR÷vi w`tq | G,tjv me GKUW 1l`aPc (Chip) Gi gta` _vtK | c0mmti AvBmi msL`v cteP Zj bvg AtbK evotj I wPc-Gi AvKvi mgvštq tQvU ntq AvmtQ | AvKvi tQvU ntj I Gi KvR Kivi 1lgZv tetob Ptj tQ | KivúDUvti mvguM0K c0uqvKitiYi KvR wmcBD-Gi gva`tgB ntq _vtK | mdUL qvti i wbt` R tevSv Ges tm Abhvqx Z` c0uqv Kiv Gi KvR | A_0 Bbcj I AvDUcj WfvBtmi gva`tg Z` Av`vb c0vtbi KvRU wmcBD ev c0mmi wbcvšY Kti _vtK | GK K_vq KivúDUvi msiké mKj hšcwZ I mdUL qvti i wbt` Rbvi gta` mgšq Kti KvR mgvav Kti c0mmi | wZbU Astki mgštq c0mmi MwZ nq |

1. MwYwZK h^³ BDwbU (Arithmetic and Logic Unit) : G Astk MwYwZK I thš^³K wmxšg K KvR msMwZ nq |

2. wbcvšY Ask (Control Unit) : G Astki gva`tg mKj KvR wbcvšZ nq | A_0 tKvb wbt` fki ci tKvb wbt` R cwj Z nte Zv wba0i Z nq G Astk | Ges

3. tiwR÷vi `šZ (Register Memory) : GU tQvU AvKvti i AZ`š-`*ZMwZi A`vqx tgtgwi ev `šZ | G `šZ t_tK Z` wbtq `*Z c0uqvKiY m`úbæq |

Avgiv Rwb evsj vt`k 1971 mvjtj i 16B wWtm[†] `faxb ivó^a wnmvte `xKuZ jvf Kti | 1971 mvjtj B BtUj c0g gvBtµvc0mmi D^meb Kti | hvi bvg t`lqv ntqQj 4004 | GUi D^mek w0tj b gwK0 h^³ivt0i tUW nd, ÷`vb tgRi, tdWwttKv d`wMb Ges Rvcitbi gmvttZwK wkgv |

tZvgiv AvMB tRtbQ Rtbfi ci t_tKB c0mmti i 1lgZv mgvštq evotQ | GKUv D`vniY w`tj B wclqU tZvgv` i KvQ `úó nte | 4004 gvBtµvc0mmti UibwR÷ti i msL`v wQj

2300wU Avi eZgvtbi tKvi AvB tmftb c0mmti i UibwR÷ti i msL`v 227,00,00,000wU ! fweł`tZi K_v Kíbv Ki !

cw_exi bvbv RmZ-tMvöxi gvb| th wefæfvlvq K_v
 etj - Avt`k-ibtt`R t`q Zvi meB KµúDUvi wK wK
 cvjb Kti | wKšy-Kxfvte mevi fvlv wKsev ibtt`R
 KµúDUvi etS tdtj ?- GB cñwi DËi Rvbvi Rb`
 wðqB tZvgv`i gb AvKcvKz Ki tQ | Gi mnR DËi
 nt`Q KµúDUvi Z_v cñmmi Avmtj Kvi l fvlvB
 tevS bv | tm Zvi ibtRi fvlvB iay tevS |
 KµúDUviti i fvlvq tKej gvÎ `fUv A¶i 000 Ges 010 |
 000 gvtb nt`Q 0 t_tK 2 tfvè we`yr Avi 010 gvtb
 ntPQ 3 t_tK 5 tfvè we`yr | G fvlvi bvg tgvkb
 fvlv (Machine Language) | ai Zug evsjv l
 BstiwR fvlvq K_v ej tZ cvi wKšyevsjv l BstiwR bv
 Rvbv divmx f`tj vtKi mvt_ K_v ej tZ Pvl - Gt¶tÎ
 GKRB t`vfvli mrvnh` ibtq K_v ej tZ nte | tZgvb
 cñmmi tK Avgvt`i fvlv tevSvZ Abjev`K tcñMg ev
 mdlUI qvti i cñqvRb nq |



Avgvt`i Z_v cw_exi Zver fvlvi cñZw A¶i l cñZxKi Rb` tgvkb fvlvi wv`© tKw
 itqtQ | Abjev`K tcñMg Avgvt`i fvlvtK cñmmi ev tgvktbi tevaMg` tKvW i evŠi Kti |
 bvbv ai tbi tKw itqtQ | D`vniY`ie ASCII (American Standard Code for
 Information Interchange) tKvWi K_v Dtj E-Kiv hvq | ASCII tKw 8 vetUi tKw |
 G tKw Abhvqx

A = 100001

B = 1000010

? = 0111111

, = 0101100

BZ`w | eZgvb mefc¶v Rbwcb tKw ntjv Unicode- Gw 16 vetUi tKw | tZgivi
 hLb tcñMgvi nte ZLb AtbK fvlvi mvt_ tgvktbi fvlvl tZvgv`i Rvbv ntq hvte!

`j MZ KvR
 GKw cjtby bó KµúDUvi Ltj gv`vi teWw j ¶ Ki Ges Gi `ewkó`mgn eYBv Ki |
 *Kgc¶¶ GKw tkv KvhpG G KvRi Rb` eivl Ki tZ nte |

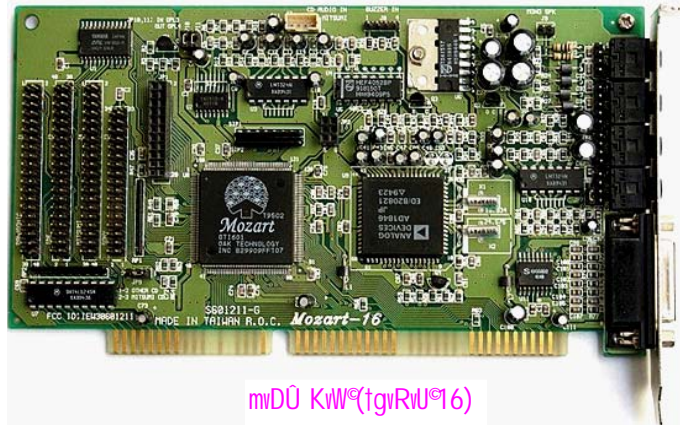
📖 **bZb wLjvg** : IC, Chip, Arithmetic and Logic Unit, Control Unit,
 Register Memory, ASCII tKw, Unicode.

Şekil 15 : Ses Kartı ve Ses Kartı

şekil 15 : Ses Kartı (Sound Card) : Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır.

şekil 15 : Ses Kartı (Sound Card) : Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır.

şekil 15 : Ses Kartı (Sound Card) : Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır.



şekil 15 : Ses Kartı (Sound Card)

şekil 15 : Ses Kartı (Sound Card) : Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır.

şekil 15 : Ses Kartı (Sound Card) : Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır.

şekil 15 : Ses Kartı (Sound Card) : Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır.

şekil 15 : Ses Kartı (Sound Card) : Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır. Ses Kartı, bilgisayarın ses çıkartmasını sağlayan bir karttır.

me M nd. KvWB Avgv  i w gwi K (2wW) Qwe   L Z cvi  | Z e eZ v b w gwi K (3wW)
Qwe   L Z m  g M nd. KvW  cvl qv hvq| Aek  w gwi K Qwe   L Z ntj Avgv  i



w gwi K Qwe   L Z m  g
gvbUi c qvRb n e| M nd.
Kv W  G Db Zi d j AvR Ki
w  b Avgiv G Kev i Rxe  
ev  e Qwe   L Z cvi wQ !

mvD  Kv W  g Zv M nd.
Kv W  Bbc   I AvDUC  
Kv b vi    K| GQvovI
M nd. Kv W  Mgm&tLj vi Rb 
Avj v v  cvU     K| d j
mn RB  Mgm&  Lj vi Rb 

Rq   Km&ev Ab vb  h  ms thvM    I qv m    nq|

  j MZ KvR
mvD  KvW  M nd. KvW Qvov AvI K  ai bi AvDUC   KvW  tj  Zvgv  i Rb  m  eav
nq?   j Av j vPbv K i Dc  cb Ki |

 **bZb   Lj vg :** Gbvj M, A vg    qv  , GWvPvi , w gwi K, w gwi K |

cvV 16 I 17 : BbcV I AvDUcV WfVbm

gıbUi (Monitor) : gıbUi gj Z GKıU AvDUcV WfVbm| GLb Ggb gıbUi I cvl qv hvq hv GKbmv_ BbcV WfVbm wımvteI KvR KiZ cvti | tZvgiv wıöqB efs tMQ GLvfb UvPw_ gıbUi i K_v ejv nı"Q| AvRKvj UvPw_ bmn tgvevBj tcvb, U'vetj U Kırsal DUVİ, j "vcUc wKsev mvaviY gıbUi meLvfbB cvl qv hvq| tZvgıv i AfbKB nqtZv Gigfa" Gme e'envi I Kti tdtj Q|



wıAvıU gıbUi, Gj wıwW gıbUi I Gj Bıw gıbUi

Avgt`i evmvi tUıj wfkıbi mv_ gıbUi i tZgb cv_R" tbB| bvbv AvKıZi gıbUi cvl qv hvq| gıbUi i KtYp "NqK gıbUi i mvBR wıtmte aiv nq| AvtM wıAvıU ev K'vt_W ti wıDe gıbUi B mevB e'envi KiZ| GLb cvZj v Gj wıwW (wj KBW wı÷vj wıwıtc)-ev Gj Bıw (j vBU BıgıUs WıtvqW) c`ı gıbUi e'eüZ nq| G_tj v nvj Kv cvZj v| t`LtZ AvKıYxq Ges ve`jr LiP wıAvıU gıbUi i Zj bvq AfbK Kg|

wıUvi (Printer) : gıbUi i ci th AvDUcV hşU Avgt`i tewk cıqvRb nq Zv nı"Q wıUvi | Kırsal DUVİ cıwıms Kivi ci Gi AvDUcV KvmıR Qıcvıbvı Rb" Avgt`i wıUvi e'envi KiZ nq| wıwıUvj K'vtgıvq tZvj v Qıel Avgiv wıUvı wıU Kti _vıK| mvaviYZ wıZb aııbi wıUvi cvl qv hvq|

K. WU g'ıwıU: wıUvi : GıU cıg wııKi wıUvi | Qıcvı e'q AfbK Kg tmRb" G wıUvıU GLbı AZ"Ş- Rbıwı| Zte GıU wııq wıLıZ Qıcvı KvR Kiv hvq bv| ZvQıov GıUı Qıcvı MıZ AfbK axi |



WU g'ıwıU: wıUvi

L. B¼tRU wclvvi : ^f`wv wclvvi
wntmte GwU euj e`eüZ| mvaviYZ
e`w³MZ KvR B¼tRU wclvvi tewk
e`envi Kiv nq| GwUz Zij Kwj
e`eüZ nq| GwU w`tq wLjz Qvcvi
KvR Kiv hvq| wtkl Kti Qwe wclv
Kivi KvR B¼tRU wclvvi
e`envi AwaK| Zte Gi Qvcvi e`q
Zj bvgj K tewk|



WU g`wU³ wclvvi

M. tj Rvi wclvvi : bvg t`tL wDqB
eS tdjt Q Gi mv_ tj Rvii
m³K©itqQ| G aitbi wclvvi tj Rvi



tj Rvi wclvvi

iwkfi mrvvth` KvMþR tj Lv Qvcv nq| tj Rvi
wclvvi Qvcvi MwZ I gvb AZ`š-DboZ I
wLjz| mvaviY Qvcv Ges Qwe wclv Dfqaitbi
KvRB GwU AZ`š-Rbwclv| GKmgq e`qeuj
_vKtj I chv³i Dbqþbi Kvity GwU GLb
AþK e`q-mvkclv|

GQovl clv I GKwU Qvcvi hšj
AwKþUKPvivy bKkv, gvbPÎ ev Mtdi wLjz
I AþK eo KvMþR wclv Kivi t¶t GwU
e`eüZ nq|

jMZ KvR
tZvgv`i w`vj tq e`envti i Rb` tKvb
aitbi wclvvi Dchv³, `tj Avtj vPbv Kti
hv³mn Dc`vcb Ki |

📖 bZb wLj vq : wAvi wU ev tK_W ti wUDe, wj KBW wµ÷vj wWmþc, j vBU BwguJs
WtqvW, AwKþUKPvivy bKkv|

t`qj ev gwëngWqv c0R±i
mvaviYZ t0R±UKtbi KvR
e`envi Kiv nq| G,tjv `jvBW
c0R±i Ges l fvi±nW c0R±i i
AvaybK i e| GwU wWvRUy
BtgR±K th tKv±bv mgZ±j
thgb- t`qj ev tW±`<i Dci
eo Kti tdjt±Z m1lg| vekvj
mfivKt±1 e`env±i Rb` Gi J¾j` GK nvRvi t±tK Pvi nvRvi jtg±Yi ntZ nq| GwU
j`v±u±i 1lgZvi Dci wbfP Kti |



Gj wmw c0R±i t_j vi j v^ú mvaviYZ Pri nvRvi NÈv e^envti i ci cwi eZ0 Ki tZ nq|
Avti K ai tbi c tR±i i tqtQ hv Gj BwW c0R±i e^envi Kti | G t_j vi j v^ú nek nvRvi NÈv
KvR Ki tZ cvti | Zte G t_j vi gj Zj bvgj Kfvte A t b K tenk | KwúDUvi ev Ab t Kv t bv
Drm thgb : tUuj wFkb, wmw/wwvfwW tcepi BZ w t_ tK B t g R w t q Zv Gj wmw tZ mieivn
Kti | Gici B t g R w GKw t j tYi gva t g mgZj c t ôi l ci t d j v nq| GRb eo t Kv t bv
Avmevtei c0qvRb c t o bv| Gj wmw ev Gj BwW c0R±i AvKv ti tQvU etj Lp mntRB
enb thvM | eZgvtb c t KU c0R±i cvl qv hvq hv KwúDUvi, U vetj U wcm ev t g v e v B j t d v b
t_ tK e^envti i m e a v t` q |

```

~jMZ KvR
th w/fvBm,tj v Avtj vPbv Kiv ntj v Gi evBti tZvgrt`i ArwÁZvi Avtj vtK Bbcj
I AvDUCu w/fvBtmi GKuU Zwj Kv`Zwi Kti Dc`'vcb Ki |

```



bgbv cɔ́kɛ

1. Zɔ́g GKwU Qweɪ wɛ́wRUvj cɔ́Zwɔ́ ɛ́c Kiɛ́Z Pvl | G tɛ́tɛ́tɛ́ Kwɛ́duvɛ́i i tKvb wɛ́fɛ́Bmɔ́U é'envi Kiɛ́tɛ́?

- K. cɔ́wɛ́i L. Kx tɛ́wW[©]
M. wɛ́ɔ́Uvi N. ˊ<ˊvbvi

2. cɔ́mmi tK Kwɛ́duvɛ́i i gw̃—[®]< ej v hvq Kvi Y-

- i. GwU gṽˊvi tɛ́tɛ́wɛ́p mṽt_ mshɔ́p_ ṽtK
ii. cɔ́mmi Kwɛ́duvɛ́i i mKj KṽtRi w̃b̃tˊRbv tˊq
iii. Gi gvaˊtɔ́g Zt_ˊi cɔ́pɔ́qvKiY mɛ́ubɔ́ng

w̃b̃tPi tKvbɔ́U mɔ́VK?

- K. i L. ii
M. iii N. i, ii I iii

3. tZvgvi wɛ́wRUvj Kˊṽtɔ́gɪvq tZvj v Qwe tɛ́f ev msi ɛ́ɪY Kiɛ́Z tKvb wɛ́fɛ́Bmɔ́U é'envi Kiɛ́tɛ́?

- K. ig L. iˊvg
M. cɔ́mmi N. nvW[®]Wˊ<

4. GKmɛ́t_ mɪvmwi Qwe tˊLv I K_v ej vi Rbˊ tKvb tKvb wɛ́fɛ́Bm é'envi Kiv nq?

- K. tɔ́gveɪBj tɔ́dvb I I tɔ́qe Kˊṽtɔ́gɪv L. I tɔ́qe Kˊṽtɔ́gɪv I gṽB̃t̃m̃ṽt̃dvb
M. Kwɛ́duvi I gṽB̃t̃m̃ṽt̃dvb N. Kwɛ́duvi I I tɔ́qe Kˊvg

w̃b̃tPi Ab̃tˊQˊwU cɔ́to 5 I 6 bɛ́t̃ cɔ́kɛ́ DĖi ˊvl :

gw̃Zb m̃ṽt̃t̃ei eo bvZbx KYv jˊvcŨt̃c ẽt̃m evs̃j̃ṽt̃ˊk I ˊwɛ́ɪY Aw̃p̃Kvi w̃p̃t̃KU tLj v tˊL̃t̃Q | G tˊt̃L gw̃Zb m̃ṽt̃ne Zvi bvZbx̃t̃K ej t̃j b, 0̃ZB jˊvcŨt̃c m̃ṽt̃Uj vBU m̃st̃hṽM w̃b̃t̃q̃Qm?0̃ KYv tLj ṽt̃L̃t̃Z cṽt̃i |

5. KYv tLj v tˊL̃t̃Z cṽt̃i -

- i. B̃ṽUvi t̃bU é'envi K̃t̃i
ii. jˊvcŨt̃c w̃Uw̃f Kw̃W[®]ns̃t̃hṽM K̃t̃i
iii. t̃Uw̃j w̃f̃kb-jˊvcŨc m̃st̃hṽM K̃t̃i

tKvbɔ́U mɔ́VK?

- K. i I ii L. i I iii
M. ii I iii N. i, ii I iii

6. tLj wU ti KW[®]Kivi mẽt̃P̃t̃q m̃p̃eavRbK wɛ́fɛ́Bm tKvbɔ́U?

- K. nvW[®]W̃B̃f L. t̃cbW̃B̃f
M. w̃m̃w̃ N. w̃w̃f̃w̃

7. 6 bs cɔ́kɛ́ DĖi wU cQˊˊ Kivi Kvi Y eˊvLˊv Ki |

.....

ZZxq Aa`vq

wbivc` I ^bwZK e`envi



GB Aa`vq tk!l tZvgiv :

- 1. gv^vwZwi³ e`envti i qvwZKi w`Kstjv e`vL`v Ki!Z cvi te;
- 2. mvgvwRKtq!t Gi c!ve eY!v Ki!Z cvi te;
- 3. Z_ I thvMthvM chv³i e`envi m!u!K! AvBb e`vL`v Ki!Z cvi te;
- 4. wbivc` I ^bwZK e`envti i c!qvRbxqZv e`vL`v Ki!Z cvi te;
- 5. gv^vwZwi³ e`envti i cwi YvZ m!u!K!KvUD AvK!Z cvi te|

i'ayth I tqemvBU Zv bq, BvUvibU e'envi Kti Zug hLb Ab't`i mvt_ thvMvthvM Ki ZLb nVvr Kti i'aycwiwPZ gvbj bq, m'uyAcwiwPZ gvbj i mvt_ I thvMvthvM ntq thtZ cvti | bv etS tKvibv AcwiwPZ gvbj i mvt_ mij wekltm thvMvthvM Kti Zug hw` Awie®<vi Ki gvbj wU Avmtj GKUv Amr Df'ik` wbtq BvUvibU nVvr w`tqtQ? gvbj wU tK Zug hw` tZvgvi bvg wKvbn tdiv b'at Qwe w`tq etm _vK Avi tmB gvbj wU hw` tm,tjv tKvibv Lvivc Df'ik` e'envi Kti ZLb Zug Kx Ki te?



BvUvibU Atb`i mvt_ i p, AmshZ, Akvj xb nte bv |

KvtrB K'w'uDuvti BvUvibU e'envi Kivi c'lg wbgwUB nt'Q KLtbv AcwiwPZ gvbj tK wbtRi cwi Pq bvg wKvbn Avi cvml qW® tZ nq bv |

BvUvibU AcwiwPZ gvbj t`i thvMvthvM Kivi AtbK i Kg wec` ntZ cvti, thtnZtKD t`L tQ bv ZvB Zt`i K_vvZ® AtbK mgq AmshZ ntq thtZ cvti, kvj xbZv Qwotq thtZ cvti | m'vZ`Kvi Rxeib Awg hw` AmshZ ev Akvj xb e'vcvi bv t`wL Zvntj mvBevi RMtZ tKb tmwU t`Le?

mevKQfZB eqtmi GKUv e'vcvi AvtQ- Zug w'obQb j ¶ Kti Q tZvgvi eqmx tQtj tqtqt`i Rtb` tj Lv eB,tjv cotZ tZvgvi fv'tjv j v'tM, eot`i Rtb` tj Lv eB,tjv ZZ fv'tjv bvl j w'tZ cvti | i'ay ZvB bq, AtbK mgq tmUv cotZ w'tq Zvi weiqe`'i Kvi tY Zug i w'ZgZ av°v tL tZ cvi | mvBevi RMtZ tmUv ntZ cvti, nVvr Kti tZvgvi mvgtb hw` Ggb w'QyP'tj Avtm thUv tgv'tU tZvgvi eqtmi Dc'thMx bv, Zug i w'ZgtZv av°v tL tZ cvi - tZvgvi gbUvB wew' tqt thtZ cvti | KvtrB mZK®_vKv fv'tj v |

tZvgiv hviv K'w'uDuvti BvUvibU e'envi Ki Zviv wbtPi wZbU wbgg tgb Pj, t`L te KLtbv tKvibv mgm`v nte bv |

- (1) BvUvibU KLtbv GKv Ab't`i tPtLi Avontj e'envi Ki te bv, Ggb RvqMvq etm e'envi Ki te thLv'tb mevB tZvgvi K'w'uDuvti i w`b t`L tZ cvq |
- (2) fv'tj I tKvibv AcwiwPZ gvbj tK wbtRi bvg cwi Pq Qwe ev cvml qW® t` te bv |
- (3) BvUvibU e'envi Ki te Avb't`i Rtb`, Kv'tiv ¶wZ Kivi Rtb` bq- tZvgv'tK nqtZv t`L tQ bv Zey KLtbv AmshZ nte bv, i p nte bv, Akvj xb nte bv |

`j MZ KvR
 (1) K'w'uDuvti ev BvUvibU Qvovl tZvgvi Rxeib e'envi Kiv Avi Kx Kx cby³ m'pZb'v'te e'envi Kiv DvPZ Zvi GKUv Zwj Kv Ki |
 (2) BvUvibU e'envi Kivi wZbU wbgg wj tL GKUv my`i tcv÷vi ^Zwi Ki |



bZb w'KLj vg : mvBevi RMr, wec³4bK I tqemvBU, cvml qW®

cW 20-22 : AvmW³

2009 mvTj Pxb t`tk `RbK tMBvi Kiv nq, m`uKZviv `gx `x| Zvt`iK tMBvi Kiv ntqtQ KviY Zviv Zvt`i tQtj tqtqt`i wmu Kti w`tqtQ| mewgj tq wfbawfbawgtq Zviv Zvt`i wZbRb tQtj tqtqtK wmu Kti tQ AvbgwbK 9000 Wj vti | tZvgiv hviv Letii KvMR co gvtS gvtS Avgvt`i t`tkI nqtZv GiKg Lei tZvgvt`i tPtL ctotQ, thLvBb tKvtbv GKRB Amnvq gv, wbtRi mSvbt`i gvb| Kivi mv_`bB etj wKQyAt`P mewbgqtq Ab` KvDtK Zvi wbtRi mSvbtK w`tq w`tQ| Avgiv hLb GiKg Lei cwo ZLb Avgvt`i gb Lvivc nq| Avgiv ZLb `cB`wL fvel`tZ Avgvt`i t`kwU Ggb GKwU t`k nte thLvBb Avi KLbvt tKvtbv Amnvq gvKtK GiKg wKQyKi tZ nte bv|

Pxb t`tki `gx `xi NUbv wKSygtvUI tmiKg tKvtbv NUbv bq- Zviv Zvt`i er`Pt`i wmu Kti tQ Kv`uDUvi tMg tLjvi Rb`| Zvt`i `RbBiB Gg.Gg.I. (Massively multiplayer online game) bvtg GK aitbi Kv`uDUvi tMg tLjvi Rbt` AvmW³ RbtBQ, tmB AvmW³ GZ Zxe`th tmwU tLjvi LiP tRvMvo Kivi Rbt` Zviv Zvt`i wbtRi mSvbt`i wmu Kti w`tqtQ|



wbDR wgvWqvTz Pxb t`tki GK `uZi mSvbt wmu Kti t`qvi Lei |

GwU LpB GKwU A`vfwK NUbv Ges hLb GB NUbwU mviv cw_extZ Rvbrvwb nq ZLb Guv wbtq tZvj cvo ntqWj | cw_exi gvb| ZLb AvZwKZ ntq Awv`<vi KtiWj th Kv`uDUvi tMg Ggb AvmW³ RbtB thtZ cvti hLb Gi Rbt` mvaviY KvUAvb chS-DavI ntq hvq| Avgvt`i meviB Guv gtb ivLv`iKvi- tKvtbv wKQy fvtj vj vMv LpB `vfwK NUbv, Avgvt`i RxeBb AtbK wKQb Avgvt`i fvtj v j vM, Avgiv tmUv Kwi ZvB Avgvt`i Rxeb GZ my`i | wKSy-AvmW³ m`uY`Ab` e`vci | Zvi gvtS fvtj v wKQy tbB! tKD hLb tKvtbv wKQZ AvmW³ ntq hvq ZLb Zvi KvQ hW³ KvR Kti bv, tm m`uY`A thS³ Kfvte tmB KvRwU Ki tZ `vtK | gv`K nt`Q Zvi metPtq eo D`vniY- hLb tKD gv`tK AvmW³ ntq hvq ZLb tm Zvi fqsKi AvKI` t`tK tei ntZ cvti bv, Zvi wbtRi Ges Avkcvtk hviv AvtQ Zvt`i mevi Rxeb tm aYsm Kti t`q |

KvúDUvi tMtgí Avm³ I wK tm aiþbi ntZ cvti | tZvgiv hviv KvúDUvi tMg tLjtQ wKsev hviv nqtZv fvel`tZ KvúDUvi tMg tLjt Zvt`i GB K_vlv gtb ivLtZ nte- tZvgiv thb velqUv DctfVM Kitz cvi wKšytKvtfvfvteB thb Avm³ bv ntq co |



tQvU wki iv mntRB KvUþb Avm³ ntq thtZ cvti |

tKvtfv GKlv wltq Avm³ ntqQ Kx bv tmUv Kxfvte tevSv mæe? KvRwU tgvfUI KwWb bq- hLbB t`Lte tKD GKRB tKvtfv GKwU KvR gvŷv Qwotq tdj tQ ZLbB eŷte tm tmB KvR Avm³ ntq tMtQ | Avgvt`i t`tk tUwj wfkþb AþK iKg KvUþ t`Lvq- tZvgiv mevB tmBme KvUþ t`tLQ, t`tL nqtZv nwmþZ KwU KwU ntqQ | hLb

tUwj wfkþbi mvgþb t`tK DþV GtmQ tmB KvUþbi K_v fþj Ab` tKvtfv KvR gb w`tqQ | wKšyhw` GiKg nq th Zwg tUwj wfkþb tQto DVtZ cvi Q bv wKsev hLbB tUwj wfkþbi mvgþb Avm ZLbB tUwj wfkþb KvUþ t`L Ges tZvgiv Rþb` Aþb`iv tUwj wfkþb Ab` wKQyt`LtZ cvti bv ZLbB Zwg eŷte th tZvgiv Avm³ RbwtZ`i`KtittQ- tZvgiv ZLbB mZK`nI qv`iKvi | AþK evmtZ evel-gvtqiv GB velqUv fvtjv Kti eŷSb bv, Zviv tQvU ev`Pvt`i kvš-ivLvi Rþb` KvUþ P`vtbj Ltj tUwj wfkþbi mvgþb ewmtq tiþL t`b | axti axti Ggb Ae`v ntq hvq th tQvU ev`PwU KvUþ Qvov Avi wKQyeŷtZB cvti bv, ZvtK tUwj wfkþbi mvgþb t`tK miþbv hvq bv Ges GB ev`PwUi gvbwmK weKvþk AþK eo mgm`v ntZ cvti |

iay th KvUþ P`vtbj ev KvúDUvi tMtg Avm³ ntZ cvti Zv bq, tKvtfv GK aiþbi LvevtiI Avm³ ntZ cvti | wKQyb AvtM Leti i KvMtR t`Lv wMtqtQ weŷUþbi GKwU tqtq wcrRv Qvov Avi tKvtfv wKQytLtZ cvti bv | MZ GKwŷk eQi t`tK tm mKvtj i bv`-vq, `þtj i jvÃ, ivtZi wWbvi ev`þUv Lvevti i gvSLvtb ø`vK wntmtel tm iaywcrRv Lvq | tm thþnZiAvi wKQyLvq bv, tLtZ cvti bv, GUvI Lye eo aiþbi Avm³ |

KvþRB tZvgvt`i meviB Lye mZK`vKtZ nte thb tKvtfv wKQþZ tZvgvt`i Avm³ Rþbþbv hvq | thþnZi GKevi Avm³ ntq tMtj tmLvb t`tK tei nI qv Amæe KwWb ZvB meþPtq fvtjv nt`Q tKvtfv wKQþZB tKvtfvfvte Avm³ bv nI qv |

`j MZ KvR

KvúDUvi tMtgí Avm³ i fqvenZv wbtq GKwU bvUK wj þL mevB wgtj Awfbq Ki |

eqmx tQtj tqtq` i meviB RvbtZ nte KmpuDUvi Lp PgrKvi GKUv hšj Zvi e`envi thb nq cQvRtb- KLtbvB thb ZvtZ Avm³ Rtbv hvq|

KLtbv hv` mwZ` mwZ` Avm³ Rtbv hvq ZLb tmLv t_tK ZvtK tei Kti Avbvi Rtb` meviB GKUv `wqZj _vtK| tmRtb` th gvb|ui KmpuDUvti Avm³ RtbvQ ZvtK KmpuDUvti i evBti i RMr t_tK| Avb` cvl qv wkvLtg w`tZ nte- metPtq my` i welq nt`Q tLj vaj v| hvi Avm³ RtbvQ ZvtK mgq WK Kti vbtZ nte- w`tb KZqY tm KmpuDUvi e`envi Kite (thgb GK Nvvi tenk bq|) i ayZvB bq, Ab` tKvbtv GKUv KvR Kti ZvtK KmpuDUvi e`envti i tmB mgqUKz ARB KitZ nte| gtb ivLtg nte- KmpuDUvi Lp PgrKvi GKUv hšj ev Uj - Avgiv tmUvtK e`envi Kie, wKšytmUv thb KLtbv Avgvt` i e`envi bv Kti |

`j MZ KvR

KmpuDUvti Avm³ GKUv tQtj ev tqtq mviw`b Kxfvte w`b KvUvq tmUv vbtq GKUv KvíwbK Mí wj L|

AvRKvj Z_ chv³ i RMtZ bZp GK aitbi Avm³ t`Lv w`tqtQ tmUvi bvg nt`Q mvgwRK thvMvthvM tbUI qvKq GiKg AtbK aitbi mvgwRK thvMvthvM tbUI qvKq i tqtQ, thgb: tdmeK, UBvvi, wj sKW&Bb, mgwR BZ`w` | tdmeK e`envi Kti mviv cwxexi 90 tKwU gvb| | GB gntZ³ Avgvt` i evsj vt`tki cQ 25 t_tK 30 jvL gvb| tdmeK e`envi Kti Ges Gi msL`v evoQt|

GZ vekvj msL`K gvb| th mvgwRK thvMvthvM tbUI qvKq e`envi Kti Zvi iZjv vbtqB Lp mntR tevSv hvq| gvb| i tfZti tKvbtv GKUv Z_ Qwtq t`evi Rtb` GB tbUI qvKq³ vi tKvbtv Zj bv tbB| cwxexi AtbK t`tk MYZšj tbB etj miKvi tRvi Kti t`kUvtK kvmb Kti Ges AtbK mgq GB mvgwRK tbUI qvKq e`envi Kti mvaviY RbMY msMwZ nq Ges iwxZgZ Avt`vj b`ii` KitZ cvti | tZvgiv i`tb AevK nte AvRKvj cwxexi AtbK t`tki ^`tkvM ev mvgwi K kvMKtK Avt`vj b Kti mwi tq t`qvi wQtb GB mvgwRK tbUI qvKq³ vi AtbK eo fvgKv ti tLtg| Avgiv hLb AtbK gvb| i KvQ tKvbtv Lei cvvtZ PvB ZLb gntE³ gta` AmsL` gvb| i KvQB tbUI qvKq e`envi Kti Z_ tjv cwtq t`qv hvq|

GB mvgwRK tbUI qvKq e`envi Kti AvRKvj gvb| Rb GtK Atb`i mvt_ mpuK³ ev thvMvthvM ivtL| Kgeqmxiv Z_ chv³ tK Lp mntR MhY KitZ cvti etj mvgwRK tbUI qvKq³ v Kgeqmx` i gvtS LpB Rbwcb| mvaviYZ GKUv vbw` B eqm bv nl qv chš-GB tbUI qvKq thvM t`qv hvq bv wKšy Zvi cti | AtbK Kgeqmxiv vbtRi mpuK³ fj Z_ w`tq mvgwRK tbUI qvKq thvM w`tq t`q Ges tmUv _vgvbtvi Lp mnR Dcvq tbB| tZvgiv nqtZv hv³ w`tZ cvi tKvbtv GKUv welq hv` fvjv nq Zvntj tQvUv tmUvtZ thvM w`tj qwZ Kx? Avgiv tZv Kgeqmx` i Letii KvmR cotZ vbtla Kwi bv, tUwj wfk b t`Ltg evav w`B bv Zvntj mvgwRK tbUI qvKq thvM w`tZ AvwE Kie tKb?

cvW 23 : KucivBU

KucivBU I tgav^Z;msi¶¶Yi aviYv : gvb¶I Rxbhvc¶b `ß ai¶bi mæc¶i c¶qvRb nq| Gi GKwU Avgiv Lp mntR e¶tZ cwi, thwU `uk©Kiv hvq, thgb: ewo, Mwo, UvKv-Kwo, Rvgv wKsev Lrevi | G_tjv gvb¶I RvMwZK, Zte i'ayGmteB gvb¶ ZB _v¶K bv| Zv¶K Zvi gvbweK _Y¶KI jvj b Ki¶Z nq| tm Mvb i'tb, KweZv Ave¶E Kti, wmtbgv t`tL, Qwe Av¶K, Qwe Ztj wKsev KwæCDUvti tMg tLtj ev Ab" tKv¶bv KvR Kti | GmKj ey¶ewEK Kv¶Ri gva'tgl mæc` m¶ó nq hv¶K Avgiv ej tZ cwi ey¶ewEK mæc` | gvb¶ wæfveZB Zvi me ai¶bi mæc`¶K AwKto ivLtZ Pvq, i¶¶v Ki¶Z Pvq| e` RMtZi mæcwiE_tjv Ggb th, tKD PvBtj B tmlU wbtq thtZ cvti bv, ev Av¶i KUv GKB iKgfvte evbvtZ cvti bv| tKv¶bv tj vK Bt"Q Ki¶j wK Avj w¶tbi `ZtK w¶tq tZvgvi ewoUv Ztj wbtq thtZ cvte? cvte bv| KviY tmlU GKw¶tK mæe bq Avei Ab"¶tK AvBbi tmlU Ki¶Z t`te bv| A_P ativ Zug my`i GKwU Mvb wj tL tmlUtZ mj Ki¶j | Zvici tZvgvi eÜ¶i tkvbtj | ZLb tZvgvi eÜ¶i GKRb Bt"Q Ki¶j tmlU Abt`i Kv¶Q wbtRi Mvb etj Pwj tq w¶tZ cvti, Zug bvl RvbtZ cvti| Avei wbtRi bvtg `we bv Ki¶j | GgbwK tZvgvi AbgwZ Qvov tmlU tm wevfbe`v¶b Mb¶tZ cvti | Zug GKUv my`i KweZv wj Ltj, tmlU tKD GKRb tZvgvi AbgwZ Qvov tKv_vl Qwictq w¶tZ cvti | GiKg hw` nq Zvntj tmlU mgv¶Ri Rb" my`i nq bv| KviY Gi dtj hviv mRbkxj KvR Kti Zviv Zv¶i Kv¶Ri h_vh_`¶KwZ cvq bv| GgbwK Gi Rb" hw` Zv¶i tKv¶bv Aw¶_¶ jvf n¶l qvi K_v tmlU nq bv| Avgiv GKwU Mt¶i eBtqi D`vniY t¶tK GB e'vcvniU Av¶iv GKUv fv¶jv Kti e¶tZ cvie| GKRb tj LK Zvi ktj, mgq Ges w¶šv w¶tq eBw wj tLb| Gici GKRb c¶kvkK eBw c¶kvk Ktib| wZwb evRvi t¶tK KvMR wKtb, eBw Qwictq, evavB Kti, wevfbe wetpZvi gva'tg Avgvt`i Kv¶Q tc¶tQ t`b| `fveZB G Kv¶R Zvi th LiP nq tmlU ati wbtq wZwb eBtqi wepqqj` wba¶Y Ktib| Gi gta` GKwU Ask tj LK cvb hv¶K ejv nq iq'vjwU| GLb hw` tKD tj LtKi ARv¶š-Zvi eB tei Kti tdtj Zvntj tj LK Zvi GB c¶c` t¶tK ewÄZ nb| Kv¶RB Ggb GKUv e'e`v _vKv`iKvi thwU mRbkxj Ktg¶ hviv m¶óv Zv¶i GB Awakvi A¶¶æev eRvq ivtL| c¶_exi t`tk t`tk ZvB mRbkxj m¶óKtg¶ Kwc ev cpircv`b, A%ea e'envi BZ"we etÜi Rb" AvBtbi weavb ivLv nq| tht¶nZi GB AvBb Kwc ev cpircv`tbi Awakvi msi¶¶Y wbtq `Zwi ZvB GwU¶K KucivBU (Copyright) AvBb ev mst¶¶tK KucivBU etj |

gy`Y hš; Awæ<vi n¶l qvi ci eB Kwc Kiv ev bKj KivUv mnR ntq wMtq¶Q| ZLb tj LKt`i Awakvi msi¶¶Yi Rb" me¶g h¶iv¶R" 1662 mvtj KucivBU AvBb (Licensing of the Press Act 1662) c¶g cvj ¶gtU cvm Kti | GB AvBtbi AvL Zvq hviv Zv¶i eBtqi Abb¶gwm Z Kwc Kiv eÜ Ki¶Z Pvq Zviv Zv¶i eB tiwRt÷kb Kti GKUv jvBtmY wbz| eB w¶tq mPbv ntj | cti t`Lv hvq mRbkxj Ktg¶ Ab"vb" c¶kvtki | msi¶¶Y c¶qvRb| ZLb wevfbe Awæ<vi, e'emvi gvK¶ BZ"we I ey¶ewEK mæc` ev tgav^Z;msi¶¶Yi AvL Zvq P¶j Avtm| KwæDUvti c¶j tbi ci t`Lv tMj eB, Qwe ev Abje Ktg¶ cpircv`b LpB mnR| Avi Bvvi tbtUi Awæ<vti ci t`Lv tMj GgbwK GLb Zv mviv `jbqvZB Qwotq t`l qv hvq| Kv¶RB KwæCDUvti gva'tg cpircv`b Ges

cv 24-26 : ^bwZKZv I tcRwi Rg

Avgiv iv~v w`tq tn#U hvl qvi mgq iv~vi `B cvtk th t`vKvb,tjv AvtQ tm,tjv evBti t_#K t`wL, c#Z`KUv t`vKvbi `iRv av°v w`tq t`wL bv `iRvUv tLvjv AvtQ Kx bv| hw` `iRvUv tLvjl _v#K Avgiv Acwi wPZ GKRb gvb#I i N#i X#K hvB bv| tKD hw` X#Kl hvq tm t`vKvbi t#Zti i me wRwbmc# j UfU K#i P#j Av#m bv| Avgiv mf` gvb| tm wnt#te Avgv#`i GKwU ^bwZK`wqZj_v#K| eis hw` KL#bv t`Lv hvq tKD Zvi `iRv f#j nvU K#i L#j P#j t#tQ Zv#K tW#K G#b ewj `iRvUv eU K#i th#Z|

Z_ chp³ Avmvi ci ueu GiKg GKUv cwi tek ^Zwi ntqtQ| BvUv tbtU Avgiv hLb wewfb#e I #qemvBU t`wL, tmLv#b th gvb| ev c#Z#v I #qemvBU %Zwi K#i#Q Zvi th AskUKztm Avgv#`i t`Lv#Z PvB#Q Avgiv tmB AskUKzt`L#Z cvB| I #qemvB#Ui wBR^ ev tMvcb AskUK#Z Avgv#`i tXvKvi K_v bq, c#QvRbl tbB| tmLv#b th#Z cv#i Zv#`i wbw`# gvb| Rb- hiv tMvcb cvml qvW#e#envi K#i tmLv#b c#ek K#i wbw`# Z_ mvr#tq iv#L, tmLv#b KvR K#i| hv#`i tmLv#b hvevi AbgwZ tbB tml wKSytmLv#b tXvKvi tP#v K#i#Z cv#i- cvml qvW#Rv#v bv _vK#j I tmUv#K cvk KwU#q A#bK mgq tKD I #qemvB#Ui t#Zti X#K ch#-hvq| tmLv#b t#Zti X#K tm tKv#bv wKQy`uk#bv K#i tei ntq Avm#Z cv#i- Avevi tKv#bv wKQycw#eZ# K#i ev b# K#i I P#j Avm#Z cv#i| th#nZi GB KvR,tjv Kiv nq w#tRi N#i GKUv Kw#uDUv#i i mvg#b e#m Ges tmLv#b Abc#ek nq thUv nqtZv j # gvb| `#i i tKv#bv RvqMv- A`k` GKwU mvBevi RMr, tjvKP#ji Avortj, ZvB tmUv aivi Dcvql _v#K bv| GB c#uqvUvi bvg nt`Q n#wKs Ges AvRKvj w#qwgZfv#e Kw#uDUv#i i I #qemvBU n#wKs nt`Q| tKD hw` i agv# tK#Znjx ntq A#b#i I #qemvB#U X#K tKv#bv #wZ bv K#i tei ntq Av#m Zv#K etj White hat hacker ev mv`v U#C n`vKvi Avi hw` tKv#bv wKQy#wZ K#i Av#m, b# K#i e#m ZLb Zv#K etj Black hat hacker ev Kv#j v U#C n`vKvi| tZvgiv i#b AevK ntq hv#e mvBevi I qv#i #GiKg AmsL` mv`v U#C Avi Kv#j v U#C n`vKvi c#Zgn#Z#N#i teov#`Q| hZB w`b hv#`Q I #qemvBU,tjv#Z teAvBbxfv#e tXvKv ZZB KwB ntq hv#`Q- w#ivc#v e#e`v c#Z gn#ZB Av#Mi t_#K ewo#q t`qv nt`Q| Zvicil n`vKviiv e#m tbB| 1983 mv#j UCCA Gi gv# 19 eQ#i i GKUv tQ#j h#iv#o#i c#Zi#v ewnbxi Av#R#ZK thMvthv#Mi w#ivc#v t#` K#i Zv#`i I #qemvBU n`vK K#i X#K w#tqvQj |

e#t#ZB cviQ n#wKs A#wZK KvR| e#xg#v cix#v K#i#Z ev eo tKv#bv P`vj t#i g#LvgyL nt#Z mev#B B#`Q K#i wKSyI #qemvB#Ui n`vK Kiv tmiKg P`vj # bq! A#wZK P`vj # tbqvq tKv#bv KwZZj tbB| hv#`i e#xg#v P`vj # tbevi B#`Q K#i Zv#`i R#b` kZ kZ mwZ`Kv#i i P`vj # AvtQ, tm,tjvB w#tZ cv#i|

hLb wGmwm, tRGmwm, GmGmwm ev GBPGmwm cix#vi dj c#vk Kiv nq ZLb I #qemvB#U tmUv w`tq t`qv nq| tZvgv#`i A#b#KB nqtZv j # K#iQ c#g hLb tmUv c#vwkZ nq, Avi mevB GKmv#_ hLb tmUv t`Lvi tP#v K#i ZLb A#bK mgqB t`Lv hvq I #qemvBUw e#m t#tQ- tKD Avi wKQzt`L#Z cv#`Q bv| tmUv A#tfw#K wKQybv- mevKQj

GKuv aviY ¶lgZv _v¶K, Kv¶RB aviY ¶lgZvi tewk ntq tMtj I tqemvBU Avi tmUv wqšY Ki†Z cvti bv| `vfweK Kv†YB tmUv ntZ cvti| Avevi A†bK mgq tKD B†Q K†i tmiKg GKuv cwi tek `Zwi K†i tdj†Z cvti thLv¶b GKuv KwúDUv†i i GKuv tcMöG Kw†gfvtē tKv¶bv GKuv I tqemvB†U cōZ tm†K†Ü kZ mnmēvi AvNvZ Ki†Z cvti- hLb Zvi av°vq I tqemvBUU APj ntq cto| Kv¶RB GuvI A%bwZK KvR, B†Q K†i GKuv I tqemvBU APj K†i t`qvi gv†S tKv¶bv KwZZjtbB|

AvRKvj A†bK cĀcwĀKvI I tqemvB†U t`qv nq| A†bK cĀcwĀKv†ZB GKuv Lei ev tKv¶bv GKuv tj Lvi wQ†b cvKiv w†R†`i gšē` wj L†Z cvti| cvWK B†Q Ki†jB A†bK mPwšZfvte GKuv LwU gšē` wj L†Z cvti- wKšyA†bK mg†qB t`Lv hvq GKRb cvWK iay iay h³nxb, Akvjxb GKuv K_v wj†L ti†L†Q| welqW w†q wKQy Kivi tbB-wKšy-mevB†K Rv†Z nte welqUv A%bwZK|



AvRKvj t`k I cw_exi cōq me _iZcyēwĀ KvB B†Uvi t†tU _v¶K| A†bK RvqMvq cvKiv mi vmi gšē` wj L†Z cvti|

B†Uvi t†tU th†nZzgvb†li w†Ri gZ

cKv†ki wekvj `vaxbZv i†q†Q- th tKD thfvte B†Qv tmfvte tmUv cKvk Ki†Z cvti| ZvB gv†S gv†S tmUv†K Ace`envi Kiv nq| B-tgB†j KvD†K AvNvZ w`†q wKsev ūgwK w`†q wPw cvW†q t`qv nq, jwK†q Kiv nq etj tmUv w†q A†bK mgq wKQy KivI hvq bv| KL†bv KL†bv t`Lv hvq tKv¶bv GKRb†K Amšyb Kivi R†b` Zvi m†ú†K¶g_v wKsev AmšybRbK tKv¶bv Z_` B†Uvi t†tU Qw†q t`qv nq| AmsL` gvb†li Kv†Q Z_` cvW†bvi th KvRwU Av†M KwVb wQj GLb tmUv A†bK mnR ntq w†q†Q, Kv¶RB tmB KvRwU fv†j vfvte e`envi bv K†i hLbB Lvivcfvte e`envi Kiv nq ZLbB e†Z nte `bwZKZv i ¶lv Kiv nq w|

`jMZ KvR

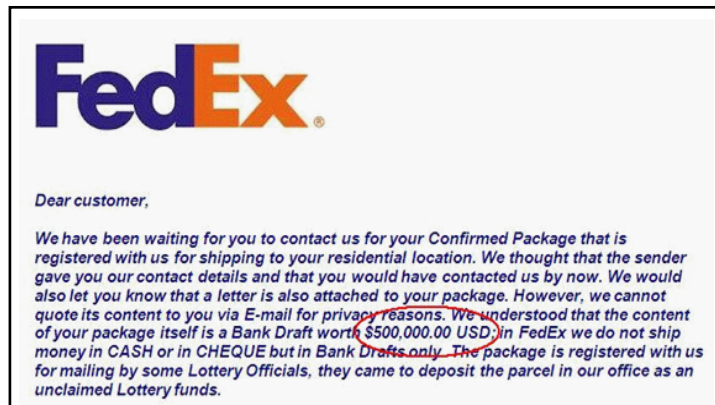
n`wKs K†i tKv¶bv GKwU I tqemvBU bó K†i w`†j tmB ¶lwZUKztKv_v t_†K i i` K†i tKv_vq chš-th†Z cvti tmUv tei Ki| tZvgvi e³te`i tcQ†b h³ t`I qvi R†b` m†ē` n`wKs†qi GKuv D`vniY `vl|

KL†bv KL†bv B†Uvi t†tU ev Z_` cōh³†Z iayth A%bwZK KvR Kiv nq Zv wKšy-bq- mxgv AwZpg K†i teAvBbx KvRI Kivi tPóv Kiv nq| I tqemvBU n`wKs Kiv iayth A%bwZK KvR Zv bq, tmUv GKB m†_ teAvBbx KvR|

B†Uvi t†tU GiKg A†bK ai†bi gvb| A†bK ai†bi A%bwZK Avi teAvBbx KvR K†i td†j-

Avgt`i tm,tjv Rvbn _vKv fvjtjv| thtnZicjiv melqUv nq mvBevi RMtZ, tPtLi Avontj ZvB cZviYvi KvRU nq metPtq temk| thgb nqtZv Kvktiv mv_ thvMvthvM Kti ejv nj th tm j Uwi tZ AtbK UvKv tctqtQ- UvKvUv wbtZ ntj AgK RvqMvq thvMvthvM Ki tZ nte| mij wekltm nqtZv tmB gvbylU thvMvthvM Kti, ZLb ZvtK tevSvbtv nq wKQyUvKv w`tj eo cij`vUv tctq hvte Ges AtbK mgq gvbylU - tmB UvKv w`tq cZviYvi dwt` cto hvq| Avevi tKD nqtZv Rvbnq th, Zvi nvtZ AtbK UvKv Ptj GtmQ Ges tm UvKvUv wbtvct` ivL tZ Pvq- ZLb AtbK tjvtf cto tmB dwt` cv t`q| KvRB mevi Rvbn _vKv fvjtjv AcwipZ gvbyl t`tk Avmv B-tgBtj GiKg Aweklm` tj vfbxq Avkym wbtmt`tn cZviYv|

BvUvbtUi eo GKwU Aciva nq tmuWU KwW[®]wtq| tZvgiv mevb wbdqb tRtb tMQ AvRKvj KwMtri tbvU w`tq UvKv cqmvi tjbt`b Lp`Z Ktg AvmtQ, cw_exi AtbKB



tmU Kti tmuWU KwW[®] w`tq| BvUvbtUi tmuWU KwW[®]e`envi Ki tZ ntj tmB KwWUil cQvRb nq bv- iay b`fwU Rvbtj B Ptj| KvRB gvbyli tmuWU KvWp b`fw Rvbi Rb` eo eo Acivaxiv AtbK eo eo

AtbK `bvgab` cZvbtbi bvg e`envi Kti cZviKiv GiKg B-tgBj cmWtq mvaviY gvbyl tK cZviYvi tPov Kti|

mvBevi Aciva Kti| mvaviYZ hLb tmuWU

KwW[®]e`envi Kiv nq ZLb wbtvct` melqU tZ AtbK ,iZit`qv nq- tmLvb t`tk b`fwU tei Kiv KwB| wKSy-cZviKiv gvbyl tK cZviYv Kti tawKv w`tq b`fwU tRtb tbevi tPov Kti Ges gvbylU tevSvi AvtM tmB b`fwU e`envi Kti eo AstKi UvKv Ztj tbq|

AvRKvj Acivaxivl BvUvbtUi e`envi Kiv i`i`Kti tQ| Zviv Zvt`i A%a KvRi Z` BvUvbtUi tfZi w`tq cvPvi Kti| mviv cw_extZB tm Rtb` AvBb cvm Kiv nt`Q| hvte i cPwj Z Avtb wePvi Kiv hvq bv Zvt`i tK GB wetkl AvBb w`tq wePvi Ki tZ nq|

cw_extZ AtbK weavS-gvbyl _vtK, fj wekym wbtq tetP _vtK, mvac0wqK, R1/2x GiKg AmsL` gvbyl ev`j AvtQ| Zviv Zvt`i wekymtK BvUvbtUi tfZi w`tq cPvi Kivi tPov Kti- wmsmv wet0l Qwotq t`qvi tPov Kti| Ggbl t`Lv tMtQ th GKwU msMVb nZvk gvbyl tK Avtiv nZvk Kwitq w`tq AvZvZ`vi w`tk tvtj w`tqtQ|

Avgiv hLb tj Lvcov Kwi ZLb Avgiv AþK bZp bZp wRwbm wkwL thUv AvtM RvbZvg bv-
Zvi mvt_ mvt_ Avgiv AvtM GKUv Lp iZcywewq wkwL, tmUv nt"Q mwZ"Kvtii gvb|
nl qv, LwU gvb| nl qv| LwU gvb|lv Ab'vq Kti bv, Ab'vq mn'I Kti bv| wbtRiv Ab'vq
Kti bv, Ab't'iþKI Ab'vq KiþZ t`q bv| Avgiv memgq ^cet`wL Avgvt`i t`þki
tQþj tqtqiv hLb tj Lvcov Kiþe ZLb Ab' AþK bZp wRwbm tkLvi mvt_ mvt_ mwZ"Kvtii
gvb| nl qvUv wkwLte|

Zvictil Avgiv gvtS gvtS t`wL QvQvixiv cix¶vi mgq t`Lv`wL Kti| tZvgiv KLþbv
KLþbv t`tL _vKte eo tKvtbv cix¶vi mgq wKQyQvQvix bKj KiþZ wMq aiv coþQ,
Zvt`i cix¶vi nj t`þK tei Kti t`qv nt"Q-GB QvQvixiv wbeþZv Kti wbtRt`i
fwel`ruvtKB bó Kti tðj tQ|

GiKg e'vci c_wexi me RvqMvZB t`Lv hvq- Z_
ch³i h¶M GB wewq,tjv nVvr Kti bZp GKUv gvtv
tctqtQ| tj Lvcov KiþZ tMþj B tnvglqvK®KiþZ nq-
tnvglqvK®tjv memgtqB wbtR KiþZ nq- Ab' tKD
tnvglqvK®Kti w`tj nqtZv fvtjv b^i cvlqv hvq wKSy-
tkLv tZv nq bv| tnvglqvK®bvbv aiþbi ntZ cvti-
QvQvixiv hZB eo Kvfm hvq ZZB Zvt`iþK AvtM eo eo
tnvglqvK®KiþZ nq| eo iPbv wj LtZ nq, eo c¶R±
wj LtZ nq- hviv mwZ"Kvtii QvQvixiv wbtRiv covtkvbw
Kti LvUvLvUbx Kti Mtelyv Kti my`i my`i iPbv wj tL|
AþK mgþqB tKvtbv tKvtbv QvQvixiv tmb cwi kþj KiþZ i wR
nq bv| tþtnZz BwUv tbtU c_wexi c¶q me wewqB wKQybv
wKQy Z_ AvtQ ZvB Zviv tmLvb t`þK ueu wewqUv wbtq
wbtRi bwtg Rgv w`tq t`q| GwU Lp eo aiþYi A%wZK KvR, GUvtK etj tcRwi Rg|



tcRwi Rtgi Awfthvthm h³i vtó¹
GB AvŠRwZK L`wZ mæubæ
mwsew`K dmi` RvKwi qvtK Zwi
ØwqZ;t`þK Ae'vnuZ t`qv nq|

tZvgiv mæEz kâUv AvtM tkvb wb, mwZ"K_v ej tZ Kx tZvgiv hw` eoþ`iþK wRtÁm Ki
t`Lte Zvt`i AþtKB GUv nqtZv AvtM tkvtbb wb| wKSyZ_ ch³i h¶M GB kâUvi mvt_
cwi wPZ nl qv `iKvi, KviY GUv c_wextZ eo GKUv mgm`v ntq`wotqtQ| etS tnvK bv
etS tnvK AþtKB tcRwi Rg KiþQ- Ges Zvt`i AþtKB GRþb Lp eo wect` cto hvq|
Avgiv Aek'B Aþt`i tj Lv cto wkwLe Ges wbtRiv wKQytj Lvi mgq Aþt`i tj Lvi mrvnh`
tblqvUv Ab'vq wKQybq| wKSyAþt`i KvQ t`þK tKvb mrvnh` wbtj wbtRi tj Lvq tmUv Lp
cwi`vi fvtetj w`tZ nq| tKvb AskUKz Zng wbtR wj tLQ Avi tKvb AskUv Aþt`i tj Lv
t`þK wbtqQ tm,tjv hw` Lp `úó _vtK Zvntj B tKvb mgm`v nq bv|

Z_ ch³i h¶M tcRwi Rg thgb tetotQ wK tmiKg tcRwi Rg aivi tKŠkj I AþK
tetotQ| tZvgiv Kx Rvb tKvtbv gvb| hw` BwUv tbtUi tKvtbv RvqMv t`þK tKvtbv wKQyueu
UþK tbq tmUv KwæDUvi mdUI qvi e`envi Kti mvt_ mvt_ LþR tei Kiv hvq?

Ab'vq Kiþj tmUv wbtRi Dci wec¾bK ntZ cvti- wKSywbtRi Rtþ` wec¾bK tm Rtþ`
bq, tZvgiv KLþbvB tKvtbv Ab'vq Kiþe bv KviY tZvgiv evsj vt`þki GtKevti LwU gvb|
ntq eo nte Ges eo ntq tZvgivB GKw` b GB t`þki`wqZ;tbtet|

`j MZ KvR : Kvþki mevB `yU`tj fwm ntq tcRwi Rg Avi gL` – Kivi gvtS
cv`R` wbtq GKwU weZtK® AvtqvRb Ki |

📖 **bZp wLj vg :** n`wks, Kvþj v Uwc n`vKvi, mv`v Uwc n`vKvi, tpmWU KwW®,
Mydoom Worm, Melissa, tcRwi Rg|

bgbv cke

1. ewotZ K^wúDUvi i vLvi metP^tq m^{je}avRbK `v^b tKvbiU?

- | | |
|-------------|----------------|
| K. emvi Ni | L. tkvI qvi Ni |
| M. Llevi Ni | N. covi Ni |

2. mvgvRK tbiU q^qKi t^qit¹ -

- e^w³i m^t_{mi} m^{vi} t^hvM^th^vM bvl ntZ cvti
- Avš^{vi} KZvi Afve _vtK
- c^zvi Z nI qvi m^qebv _vtK

wb^tPi tKvbiU m^wVK?

- | | |
|-------------|----------------|
| K. i I ii | L. i I iii |
| M. ii I iii | N. i, ii I iii |

3. K^wúDUv^ti Av^m³ GKRb e^w³ -

- | | |
|---|---|
| K. AmvgvRK ntq th ^t Z cvti | L. K ^w úDUv ^t i `q ntZ cvti |
| M. tj Lv ^c ovq f ^v j ntZ cvti | N. Ávb weÁv ^t b Db ^w Z Ki ^t Z cvti |

wb^tPi Ab^tQ`wU c^to 4 I 5 b^q c^qke D^Ei `vI :

wi gj eqm c^wP | B`wbs Ng t_tK D^tVB tm tU^wj wFk^tb KvU^q t`L^tZ i i`K^ti | G mgq tm
ever-gv^tK wei³ K^ti bv etj ever-gvI tek L^yk |

4. wi gj t^qit¹ KvU^q t`Lv^tK ej v hvq -

- | | |
|--|--|
| K. mgq KvU ^t bv | L. c ^q qvRb tgU ^t bv |
| M. KvU ^q bi c ^z Z Av ^m ³ | N. Avb` Dc ^t f ^v M Kiv |

5. wi gj c^zZ ever-gvi AvPi^tY tm -

- AmvgvRK ntq DV^tZ cvti
- kvi^w Kfv^te `p^q ntq te^to DV^tZ cvti
- mRbkxj gvb^y wmv^te M^to DV^tZ cvti

wb^tPi tKvbiU m^wVK ?

- | | |
|-------------|----------------|
| K. i I ii | L. i I iii |
| M. ii I iii | N. i, ii I iii |

PZy©Aa¨vq

I qvW©cØmms



GB Aa¨vq tk†I †Zvgiv :

- 1. mWVK cwi fvl v e¨envi K†I I qvW©cØmms e¨env†i i †KŠkj e¨vL¨v Ki†Z cvi †e;
- 2. ersj v K†evW©e¨envi †KŠkj e¨vL¨v Ki†Z cvi †e;
- 3. WK†g>U e¨e¨¨vcbv e¨vL¨v Ki†Z cvi †e;
- 4. I qv†W©ersj v WK†g>U ^Zwi Ki†Z cvi †e;
- 5. mØf†e WK†g>U e¨e¨¨vcbv Ki†Z cvi †e |

cW 27 t_tK 54 : I qvW©c0mms I evsj v Kx tevW© e'envi

tZvgiv BtZvgtaB tRtbQ, Avgiv GLb tj LvjtL, Qve AvKvmn AtbK KvRB KitZ cwi KivUDUvi e'envi Kti | I qvW©c0mms e'envi Kti tZvgiv Gi gtaB BstirZ WKtgU UvBc KitZ wkLQ | GLb G tkWtZ Avgiv wkLe I qvW©c0mms e'envi Kti evsj v WKtgU Zwi Kivi Kj vtKŠkj |



gbxi BDibKw Kx tevW©j AvDU

evsj v Kx tevW©: I qvW©c0mmsi w tq tKvbtv wKQz wj LtZ tMtj c0tgB Avgvt i c0qvRb GKw Kx-tevW© | Kx-tevW©ntj v I qvW©c0mmsi c0vb Bbcj wfvBm | I qvW©c0mmsitqi evsj vq tj LvjtL KitZ ntj Avgvt i evsj v Kx tevW©m0utK0avi Yv wbtZ nte | Bstir Kx tevW© Dci wfvE Kti XvKv vekte vj tqi evsj v wfvMi Aa'vcK knx` ejxRex gbxi tPšajx 1965 mvtj me0g evsj v UvBc i vBUvti i Rb GKw weAvbm0Z Kx tevW©j -AvDU Zwi Ktib | 1971 mvtj faxbZv- vetivax Avj e` i evnbnx gbxi tPšajxtK nZv KtiwQj |

cieZ0mgq G Kx tevW©j -AvDUB KivUDUvti i Rb Kiv nq | wKŠ-c0qvRb nq Ggb GKw mdUI qvti i hv KivUDUvti evsj v wj LtZ mnvqZv Kite | G ch0q 1985 mvtj wKQz evsj v dUmn knx` wj wc mdUI qviw c0wZ nq | wKŠ-Gw tZgb GKUv Rbwc0Zv AR0 KitZ cvtiwb | Avki kti gvSvgs t_tK i i Kti beYB kti tkli w K chŠ-AtbK,tj v evsj v tj Lvi mdUI qvi evRvti Avtm | hvi gta weRq, c0Kv k0, c0Z0v, tj Lbx c0wZ c0g mwi tZ wQj | mdUI qvi Dbqtb KitiY Ges wewfb0mdUI qvti i mvt_ m1/2wZcY0nl qvq weRq mdUI qviw e'vcK Rbwc0Zv jvf Kti | G mgq wewfb0Kx tevW© tj AvDU c0vj Z ntj I weRq Kx tevW©j AvDU metPtq GwMtq vtK |

বিজয় কী-বোর্ড লে-আউট													
~ `	! 1	@ 2	# 3	\$ 4	% 5	& 6	' 7	* 8	(9) 0	- _	= +	Back space ←
Tab	Q উ	W য	E ড	R প	T ট	Y চ	U জ	I ই	O গ	P ডু	[{] }	~ !@
Caps Lock	A ক	S স	D দি	F ফ	G গ	H হ	J জ	K ক	L ল	; ,	' ,		Return ↵
Shift	J জ	X খ	C চ	V ব	B ব	N ন	M ম	< ,	> .	? /			Shift
Ctrl		Alt											Ctrl

ৱৱক্স তেৱজি আউ

লগ্নকম্মি ৱৱক্স তেৱমপ্জ কিংজ Alt+Ctrl+B GKম্ভ_ প্ৰক্ভ ন্ধে| ৱৱক্স
ক্ৰেত্ৱেথ ত্ৰব্ভ ৱৱক্স আক্ভিহ্ভ কিংজ ন্ধে cōg আক্ভিৱ ত্ৰক্ভ ব্ৰিৱ ৱৱ (g) প্ৰক্ভ
ন্ধে| Zvici ৱৱক্স আক্ভিৱ প্ৰক্ভ ন্ধে|

ৱৱক্স হ্ভেভ্ভি :

eY©	Kx	eY©	Kx	eY©	Kx	eY©	Kx
¶	jgN	ò	NgB	Â	Igy	Á	ugI
Ä	Igu	Ã	IgY	½	qgo		

হৱ I ৱস্ভ ৱ k KৱুDuvi KৱDuYj bৱkbyj Kx তেৱৱৱ GKUv ৱস্ভ v Kx তেৱৱৱ আউ
Abtgr`b Kti†0 ৱKŠZvi e`envi GLbl i i`nq ৱb| cৱ_exi Ab` mKj fvlvi gtZv ৱস্ভ vl
BDৱ†Kৱ e`envi Kti tj Lv hvq|

ক k	ট T	প p	স s	অ o	ও ৌ OU	০ 0
খ kh	ঠ Th	ফ ph,f	হ h	আ a	ব (ফলা) w	১ 1
গ g	ড D	ব b	ড় R	ই i	ঈ - য ফলা (e)y,Z	২ 2
ঘ gh	ঢ Dh	ভ bh,v	ঢ় Rh	ঊ u	ঋ - র ফলা (e)r	৩ 3
ঙ Ng	ণ N	ম m	য় y,Y	উ u	ঋ - রেফ (v)r(c)	৪ 4
চ c	ত t	য z	ৎ t`	উ u	ঋ - হসন্ত ,,	৫ 5
ছ ch	থ th	র r	ং ng	ক k	ঈ - দাড়ি .	৬ 6
জ j	দ d	ল l	ঃ :	এ e	ঊ - ঢাকা S	৭ 7
ঝ jh	ধ dh	শ sh,S	ঃ ^	ঐ OI	ঋ - ডট . (NumPad)	৮ 8
ঞ NG	ন n	ষ Sh	জ J	ও ৌ O	ঃ (কোলন) ::	৯ 9

নির্দেশনা:

- কেন্দ্র সেন্সিটিভ
- কেন্দ্র সেন্সিটিভ নয়

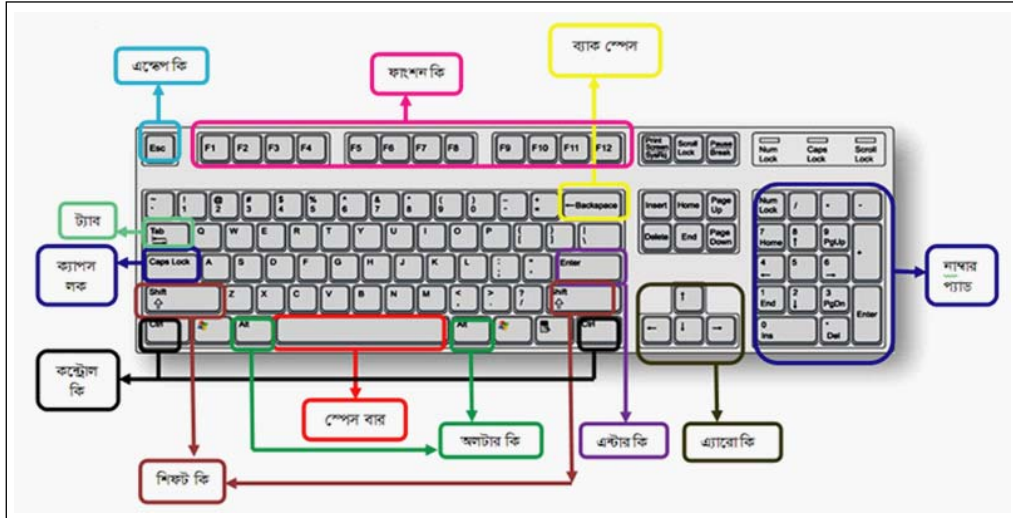
(v) -

(e) -

- Accent Key

D'Pri YৱFৱEK (tৱtৱUK) Kৱmgn

Kv†RB GKRb th Kx tevW©e`envi K†iB evsj v wj LK bv tKb, tmiU msi ¶Y Kiv nte



Kx tevW©e`envi K†iB evsj v wj LK bv tKb, tmiU msi ¶Y Kiv nte

AvšRZK wq†g tm Kv†Y GKwU wv`Š Kx tevW©e`envi K†iB evsj v wj LK bv tKb, tmiU msi ¶Y Kiv nte 2000 m†j i ci t†K evotZ v†K Bv†iBtU e`envi Kvixi msL`v| c†qvRbxqZv t†Lv t†q evsj vq I†qe tcBR `Zwi Kivi| Bv†iBtUi Rbwc†Zvi Kv†Y c†qvRb nq Ggb GKwU mdUI q†vi hv Bv†iBtUi wewfbægra†g evsj v tj Lvi m†eav G†b w†te| 2007 m†j webvg†j`i BDwb†KvW mdUI q†vi A† c†wZ nq| GwU D†Pvi YwfwEK (tdv†bUK) evsj v UvBwcs e`e`v GwU†K ZiY mgv†Ri Kv†Q tek Rbwc†Z K†i tZ†j |

D†Pvi YwfwEK (tdv†bUK) evsj v UvBwcs e`e`vq hw` "ami banglay gan gai" UvBc Kiv nq Z†e tj Lv nte ŪAvng evsj vq Mvb MvB†| G Qrov G†Z h† Kiv nq gvDm w†q evsj v tj Lvi m†eav| d†j K†v†DU†i evsj vi e`envi hv†`i f†wZ w†j Zviv m††RB evsj v e`envi Ki†Z`i`K†i| D†j E, Aw†Kvsk mdUI q†viB knx` g†xi t†šajxi D†w†Z g†xi Ac†Ugv Kx tevW©e`envi AvDUw Ašf† Kiv n†q†Q|

I qW©Cmms tc†M†g Kx†v†e Pvj yKi†Z nq? g†b Av†Q?

c††g Avgv†`i†K th tKv†bv GKwU I qW©Cmms tc†M†g Pvj yKi†Z nte| Gici evsj vq UvBc Kivi Rb` I qW©Cmms†K c†` Z Ki†Z nte| evsj vq tj Lv†j w†L Kivi Rb` c††g Avgv†`i I qW©Cmms†i w†Rq mdUI q†vi Alt+Ctrl+B GKmv†_ Pvc†Z nte Ges A† mdUI q†vi F12 Kx Pvc†Z nte| cieZx†KvR nj d†U wbe†Pb Kiv| w†Rq mdUI q†vi SutonnyMJ Ges A† mdUI q†vi NikoshBAN d†U wbe†Pb Ki†Z nte| Gevi Avgv†`i I qW©Cmms†i evsj v tj Lv†j w†L Kivi Rb` c†` Z| Kx tevW©e`envi wewfbæKx t††c t†L tKv†vq tKv†b A¶i Av†Q| A¶i`i`j vi Ae`vb Rv†Z† Z†g†v Dc†i t†Lv†bv Kx tevW©e`envi AvDU Gi

Qnei mrvnh" wbtZ cvi | Gevi i i"Kivi cvjv tj Lvjt mL | Kx tevWp wefbaKx tPtc t`L
tKvb Aqjiw tKv_vq AvtQ | axti axti tZvgiv mntRB eStZ cvi te Aqji_tjvi Ae_vb |
th tKvbtv WKtgU wbtq KvR Kivi mgq Zv thb nwtq bv hvq tm Rb" Kx KitZ nte gtb
AvtQ tZv? WKtgUwUtk GKw bvg w tq msi qY ev tmBf KitZ nte |

`j MZ KvR
Aqji_tjvi Ae_vb mwtK GKUzavi Yv ntj Pj Avgiv wbtPi KvRwU Kwi :
Avgvt`i mKtj i wcb RvZxq mxtZi cUg j vBbwU UvBc Ki |
Avgvi tmvbi evsj v
Avgv tZvgvq fvj ewm

WKtgU mwtv`bv :

Avkv Kwi tZvgiv mevB GLb evsjvq tj Lvjt mL KitZ cviQ | fj -awS_vKtQ? vKtZB
crti | Kxfvte Avgiv fj -awS_tjv`i Kie?

th cUqv AbmiY Kti GKw WKtgU i fj -awS_tjv WK Kiv nq tm KvRwUtk ejv nq
mwtv`bv | mwtv`bv mvaviYZ th KvR_tjv Kiv nq tm_tjv wbtP mstqtc eYbw Kiv nj :

wbepb Kiv (Select) : mwtv`bvi wefbaKvR AfbK mgqB WKtgU i tKvbtv Aqji, kã,
evK" ev tKvbtv Asktk wbepb KitZ nq | wbepb Kivi Rb" KvmitK wbañi Z RvqMvi
iitZ wbtZ nte | Gici wkdU Kx tPtc ati Wb Gvfviv (Shift+ →) Kx tPtc wbañi Z
tKvbtv Aqji, kã, evK" ev tKvbtv Asktk wbepb KitZ nq |



KvU (Cut) : AfbK mgq WKtgU i tKvbtv Aqji, kã, evK" ev tKvbtv Asktk
GK RvqMv t_tK Ab" RvqMvq mivtZ nq | GRb" cUtg H Aqji, kã, evK"
ev Asktk wbepb Kti KvUvi Rb" Kx tevWp Ctrl Ges x Kx GKmv_t PvcZ
nq | (Ctrl+x)



Kwc (Copy) : AfbK mgq WKtgU i tKvbtv Aqji, kã, evK" ev tKvbtv
Askki Abij w ev Kwc Kti GK RvqMv t_tK Ab" RvqMvq wbtZ nq | GRb"
cUtg H Aqji, kã, evK" ev Asktk wbepb Kti Kx tevWp Ctrl Ges c Kx
GKmv_t PvcZ nq | (Ctrl+c)



tc÷ (Paste) : tc÷ ktai Avñi K A_nj AvVv j vMvbtv | KvU i Kwc
Kivi cti i KvR nj wbepZ Aqji, kã, evK" ev Asktk wbañi Z`vfb tc÷
Kiv | GRb" KvU ev Kwc KgvU e`envi Kivi ci KvmitK wbañi Z`vfb
wbtq Ctrl Ges v Kx GKmv_t PvcZ nte | (Ctrl+v)

wVvj U (Delete) ev gtQ tdjv : WKtgU i tKvbtv Aqji, kã, evK" ev tKvbtv Asktk gtQ
tdj tZ Kx tevWp Delete ev Del Kx e`envi Kiv nq | hv gtQ tdj tZ PvB cUtg Zv wbepb
KitZ nte | Zvici Delete ev Del ev BACKSPACE Kx Pvcj wbepZ Ask gtQ hvte |

Kx tevfwP mrvvth" WKtgþUi wewfbæRvqMvq KvimiþK miþZ ntj wbtPi msw¶B Dcvq AbmiY Kiv thþZ cvti :

hv KiþZ PvB	th Kx PvcþZ nte
jvBþbi iþZ Kvimi wbtZ	HOME
jvBþbi tkþl Kvimi wbtZ	END
WKtgþUi iþZ Kvimi wbtZ	CTRL+HOME
WKtgþUi tkþl Kvimi wbtZ	CTRL+END

WKtgþU digvU Kiv :

WKtgþU ^Zwi Kiv ntjv, mæuv`bv Kiv ntjv| GLb WKtgþUþK GKUz mrvþZ nte| hvþZ Kþi WKtgþUwU t`LþZ my`i nq| G KvRUvþK etj WKtgþU digvUws|

Avgiv AþbKfvte WKtgþUþK mrvþZ cwi| Avgvþ`i AvþjvPbv KþqKwU tgþwj K welþqi Dci mxgveæ ivLe| KvR KiþZ KiþZ tZvgiv nqZ Avþiv AþbK wKQzRvbþZ cvi te|


A¶i ev tjLv AvKvi tQvU ev eo Kiv : WKtgþUi th Astki A¶i ev tjLvi AvKvi cwieZ0 KiþZ nte c0tg Zv wbePb KiþZ nte| Zvici th tKvþbv IqvW©c0mmti Uj evi ev wietb dþUi bvtgi cvþk th msLwU _vþK Zv cwieZ0 KiþZ nte| AvKvi eo KiþZ ntj msLwU evovþZ nte Ges tQvU KiþZ ntj msLwU KgvþZ nte| Kx tevfwP mrvvth"l KvRwU mnþR Kiv hvq|

hv KiþZ PvB	th Kx e`envi KiþZ nte
tj Lvi AvKvi 1 ctþU eo KiþZ	CTRL+]
tj Lvi AvKvi 1 ctþU tQvU KiþZ	CTRL+[

A¶i ev tjLvi AvKvi tev` , BUwj K ev AvÜvijvBb Kiv: WKtgþUi th Astki A¶i ev tjLvi AvKvi cwieZ0 KiþZ nte c0tg Zv wbePb KiþZ nte| Zvici th tKvb IqvW©c0mmti Uj evi ev wietb dþUi bvtgi cvþk B, l , U _vþK ZvþZ gvDm wKK KiþZ nte| Kx tevfwP mrvvth"l KvRwU mnþR Kiv hvq|

hv KiþZ PvB	th Kx PvcþZ nte
tj Lv tev` KiþZ	CTRL+b
tj Lv BUwj K KiþZ	CTRL+i
tj Lv AvÜvijvBb KiþZ	CTRL+u

WKtgþUi GjvBbtgþU : tKvb WKtgþUi c`vivM0d gwrPþbi tKvb w`þK wgtk _vKte Zv GjvBbtgþUi Øviv wba¶Y Kiv nq| mrvviYZ c`vivM0tdi GjvBbtgþU evgw`þK _vþK| c`vivM0tdi GjvBbtgþU Pvi aiþbi ntZ cvti| evgw`K t`þK, Wwbw`K t`þK, gvS eivei A_ev mew`þK mgvb (Rvw÷ dvBW) c`vivM0d GjvBb Kiv hvq| tKvb c`vivM0tdi GjvBbtgþU

cwieZ0 KiþZ ntj c0tg Zv wbePb KiþZ nq| Zvici  GB AvBKb_wj þZ gvDm wKþKi gva`tg GjvBbtgþU Kiv nq|

Kx teW^QKURvU :

hv Ki tZ PvB	th Kx e ^{envi} Ki tZ nte
evg w ^{ik} Gj vBb	CTRL+L
Wwb w ^{ik} Gj vBb	CTRL+R
gvSLvfb Gj vBb	CTRL+E
Rw÷ dvBW Gj vBb	CTRL+J

G Qrov dig^wUstqi Avtⁱv AfbK KvR AvtQ | thgb, j vBtbi e^{envi} vba^Y (j vBb t^{um}), tUvej Kiv, etj U l br^{vi}, tj Lvi is cwi eZ^B BZ^w | I qW^cmmms mdUl q^{vi} e^{envi} Ki tZ Ki tZ tZvgiv G w^{el}q^{stjv} AvqE Ki tZ cvi te |

gy^Y :

Kx gRv! Avgiv GLb I qW^cmmi e^{envi} Kti evsjvq WKtgU ^Zwi Ki tZ cwi | tKgb nq hw^U GUv Avgiv KvMtR QvcvZ cwi | Pj wk^{tL} tbqv hvK Kxfvte tKvb WKtgU Qvcv^{bv} hvq ev gy^Y Kiv hvq |

gy^Yi Rb^{ic} c^QqvRbxq :

- K^wuDUvti i mvt^{_} h^{_} v^{_} f^{ite} mshy^B GKw^U w^cUvi
- w^cUvti i Rb^{ic} i K^wmi mdUl q^{vi}
- Dch^y m^vBt^{Ri} KvMR



me wK AvtQ? Zvntj wk^Qti Ki AbgvZ vbtq AvBKtb gvDm wKK Ki (G KvRw^U Kx teW^Q m^vrvth^{ic} CTRL+p t^{ic} Ki tZ cvi) | Gici ↵ (G^vUvi) Kx Pvctj i^{ic} nte gy^Yi KvR |

WKtgU e^{envi} vcbv :

I qW^cmm^{ti} evsjvq WKtgU ^Zwi Kiv KZ mnR! Gi ctii KvR Kx? WKtgUw^U Ggbfvte msi^Qti Yi e^{envi} v Kiv hv^{tZ} Gw^U nwi^{tq} bv hvq Ges f^{iel} tZ c^QqvRtbi mgq mnt^R Lj^R cvl qv hvq | G KvRw^U tK mnRfvte WKtgU e^{envi} vcbv etj | m^vavi Yfvte th tKv^{tb} WKtgU msi^Qti Yi Ki^{tj} tmw^U gvB WKtgU t^{dv}i vti msi^Qti (tmBf) nq | wk^SymLvfb AfbtKi Kv^{tRi} gv^{tS} tZvgi Kiv WKtgUw^U w^{gtk} vKte | c^QqvRtbi mgq WKtgUw^U cvl qv Kw^b n^{tq} hvte | GRb^{ic} th KvR^{stjv} Ki tZ nte Zv vbt^P eY^{dv} Kiv ntj^v : K. gvB WKtgU t^{dv}i vi L^{tj} Zvi gta^{ic} GKw^U bZb t^{dv}i vi Lj^{tZ} nte | L. c^QvgKfvte t^{dv}i viw^U bvg w^{bD} t^{dv}i vi tj Lv vKte | Gw^U tK vbt^{Ri} gtZv Kti bvgKiY Ki tZ nte | (vbt^{Ri} bvg A^{ev} Zwi L Abh^{vqx} t^{dv}i vti i bvgKiY Ki tZ cvi |) M. tZvgi ^Zwi Kiv WKtgUw^U msi^Qti Yi Rb^{ic} K^wuDUvti tK vbt^R w^{tj} th Wwqj M e^{ic} Avmte tmLvfb tZvgi t^{dv}i viw^U gvD^{mi} Wvej wKK Kivi gva^{tg} L^{tj} Zvici msi^Qti Yi Ki | N. WKtgU msi^Qti Yi mgq Kv^{tRi} aib Abh^{vqx} WKtgU^U bvgKiY Ki | GtZ WKtgUw^U mnt^{RB} Lj^R tei Ki tZ cvi te |

^j MZ KvR
WKtgU e^{envi} vcbv c^QqvRbxqZv m^vu^{tK} GKw^U c^Qzte^{ic} b c^QZ Kti tk^W tZ Dc^{ic} vcb Ki |



bZp wkLj^{vg} : Kx teW^Q AvDU, WKtgU dig^wU^s, KvU, K^wc, tc÷, Kx teW^QKURvU, w^cU^s ev gy^Y |

bgbv c0ke

1. KuvúDUvfi tj Lvtfj wLi KvR Kivi mdUI q'vi tKvbwU ?

K. Múcd- mdUI q'vi

L. wmt÷g mdUI q'vi

M. I qvW©c0mms mdUI q'vi

N. t'úWmkU mdUI q'vi

2. D'Pvi YwFwÉK evsj v mdUI q'vi tKvbwU ?

K. weÁvb

L. c0Z0

M. tj Lbx

N. Aâ

3. 0Gúvi0 (Enter) tKvb KvR e'envi Kiv nq?

K. wbe0PZ Ask gtfQ tdj tZ

L. Kvm0tK GK j vBb wbtP bvgvtZ

M. Kvm0i i evg w' tKi A0i g0tZ

N. tgbjev Wwqj M e- ewZj Ki tZ

4. tKvfbv wK0zKwc Ki tZ tKv_vq wKK Ki tZ nte?



K.



L.



M.

N.

wbtPi Abt'Q`wU cto 5 I 6 b0t c0ke D0i `vI :

ivbj Rb0Avtgwi Kvq| tm evsj vq K_v ej tZ cvi tj I wj LtZ cvi bv| tm wK Kti tQ Ct` `v`0K
evsj vq PKrKvi GKwU KvW©cwmWtq Pg0K t'te|

5. ivbyKvW©evbvtZ tKvb mdUI q'vi wU e'envi Ki te?

K. weRq

L. tj Lbx

M. c0k0jv

N. Aâ

6. ivbyKvW0U my`i I mn0R ^Zwi Ki tZ-

i. wK0zkā Kwc Ki tZ cvi

ii. Qwe mshj0 Ki tZ cvi

iii. GwWUs Kti evbvb i'00 Ki tZ cvi

tKvbwU mwK?

K. i I ii

L. i I iii

M. ii I iii

N. i, ii I iii

cÂg Aa"vq

Wk 9 vq B>Uvi ‡b‡Ui e"envi



GB Aa"vq tk†I †Zvgiv :

1. $\mathbb{K}[t] \rightarrow B[t]$ $i: Z \rightarrow K[t]$ $cvi: t \rightarrow$
2. $\mathbb{K}[t] \rightarrow B[t]$ $e''envi: K[t] \rightarrow$ $cvi: t \rightarrow$
3. $I: t \rightarrow DRvi: e''envi: K[t] \rightarrow (cW: vel: tqi) \mathbb{K}[t] \rightarrow msuk: Z \rightarrow$ $Abjm: Üvb: K[t] \rightarrow$ $cvi: t \rightarrow$

mcqysKv Aewk" nZvk nj bv, KwpúDUvi j"vs,tqR tdvintg tm GB cktv Kti ivLj | GK NsUvi tfZti tm Awe®<vi Kij cuPRb cktvi DEi w`tq titLqQ- GKRtbi DEiUv ueú Zvi cktie DEi | mcqysKvi Avb>` t`tL tK- Gevti bZp Drmn wbtq Zvi KvR i i"Kti t`q |

NUbv 4 : i Zb BstiwR cixqv t`te- tm tek AtbKw`b t`tK BstiwR cto AvmtQ wKšyWK eštZ cviŕQ bv Zvi covtkvbn ht_ó ntqtQ bmk Avtiv`iKvi | Kx Kiŕe tmUv wbtq Zvi eÜi mvt_ K_v ejwQj | eÜzejj, òZB Ab jvBtb GKevi cixqv w`tq t`mLm bv tKb tKgb wktLwQm!ò i Zb wRtÁm Kij, òAbj vBtb cixqv t`qv hvq?ò eÜzejj, òAewk"!ò

i Zb BvUvi tbtU XfK Abj vBb cixqvi GKUv ItqemvBtU XfK t`Lj mwZ" tmLvfb cixqv t`evi e`e`v AvtQ- Lp Drmn wbtq cixqv w`tq tm Awe®<vi Kij Zvi cÜ'wZ tek fvtjv | Abj vBb cixqvq evowZ mpetuUv tm Awe®<vi Kij- th cktetjvi fj DEi w`tqtQ tm,tjvi i`x DEi Kx nte tmUv tm tRtb wbj |

NUbv 5 : i Kx BDwbfwmmŕtZ dvBevi AcuU- covq | Zvi thtnZz eqm Kg ZvB Zvi AwfÁZvI Kg- memgq gtb gtb fvtŕe Avgvi hw` tKvfbv AwfÁ wktŕtKi mvt_ cwiPq _vKZ Zvntj Zvi KvQ t`tK wktL wbtZ cviZvg tKgb Kti GB tKvmŕv Avtiv fvtjv Kti covfbv hvq |

GKw`b BvUvi tbtU GKUv Lp eo wekpe`vj tqi ItqemvBtU tLvRvLyR KiŕZ KiŕZ tm Awe®<vi Kij Zvi welq dvBevi AcuU- i cŕiv tKvfmP tj KPvi tbtU tmLvfb itqtQ- GKRb AtbK eo cŕdmi tKvmŕ tmB wekpe`vj tqi QvŦQvŦxt` i cwoŕqtQb |

i Kx mvt_ mvt_ tKvmŕtjv WvDbtjwW Kti Zvi wbtRi tj KPviUv bZb Kti mvrŕtq wbj, ciw`b tm Kvm wbtZ tmj AtbK tewk AvZwekym wbtq |

NUbv 6 : ivRxe c`v_eÁvb wbtq cvk KtiŕQ wKšy-Zvi Lp `tL Zvi wekpe`vj tqi Gt÷wcdwR- i Dci tKvfbv tKvmŕQj bv- Zvi Lp kL GB welqUv covi | nVvr Kti Lei tcj Lp eo GKUv wekpe`vj tqi GKRb eo cŕdmi Gt÷wcdwR- i Dci Ab jvBtb GKUv tKvmŕw`tQb | Zvi QvŦ ntq tm Abj vBtb cŕiv tKvmŕ wbtZ cviŕe- tnvgI qvK®Rgv w`tZ cviŕe, GgbKx cixqvI w`tZ cviŕe |

ivRxtŕi Avb>` t`tL tK- ZLb ZLbB tmB tKvmŕtZ tiwRt÷kb Kti gtbŕi Avb>` Gt÷wcdwR- cotZ i i"Kti |

Dctii 6wU NUbvi cŕZ"KwU mwZ" ! wktŕvq mwZ" BvUvi tbtUi e`envi Kiv hvq wK bv tmUv wbtq Kvŕiv gtb GLtbn mŕ`n AvtQ?

`j MZ KvR

evsj vt`tki mKj QvŦQvŦxi hw` GKwU Kti j"vcUc_vKtZv ZLb wktŕvi e`vcvŕi Avi Kx Kx Kiv thŕZ cvŕi tmUv wbtq mevB wgtj GKwU i Pbv wj L |

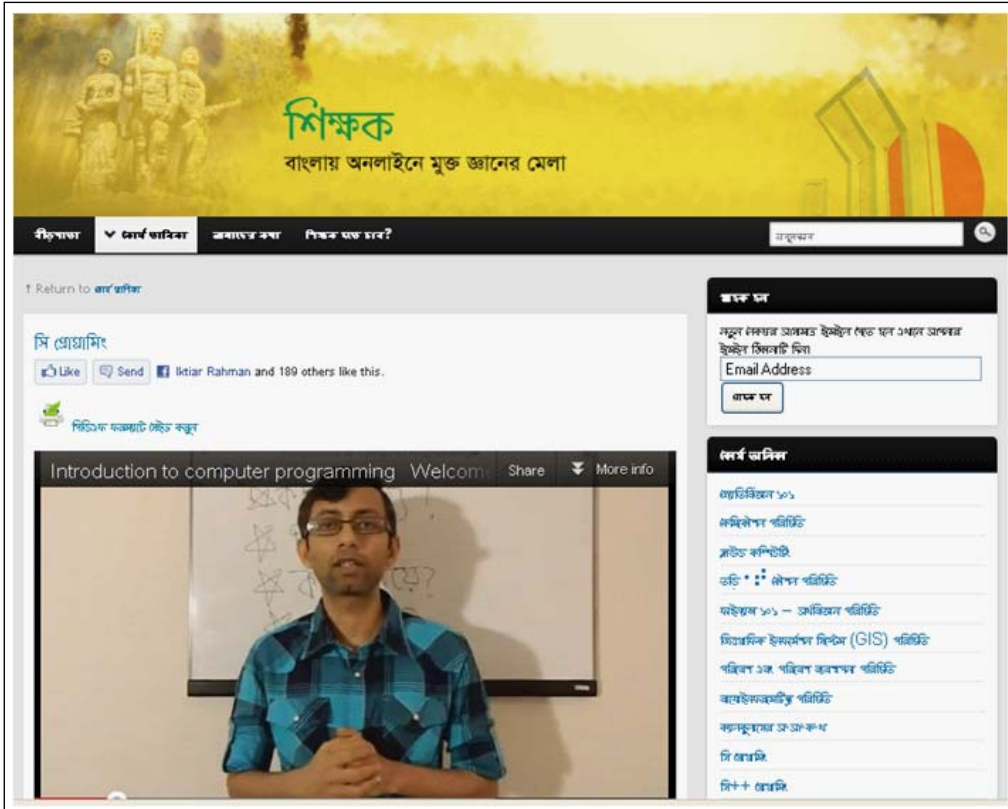


bZb wktŕvg : Gt÷wcdwR- , dvBevi AcuU- , cŕiv |

cV 56 : ৱিকীৱ্য Bৱিভউ

tZvgiv hviv AvtMi cvWU gb w`tq ctoQ Zviv wbōqB eṣtZ tctiQ ৱিকীৱ্য thme welq metPtq mnvh` KiṭZ cvi Zvi gva` GKUv ,iZcyWelq nṭ`Q Bৱিভউ| Bৱিভউ i ayth miwmwi ৱিকীৱি e'vcvṭi mnvh` Kṭi Zv bq- ṭḡ Kṭj R wekṭe`vjṭqi gṭZv ৱিকীৱ cōZōvb,ṭjv thb WKGZ KṭR KiṭZ cvi tmLvṭbl ctiṇṇṭe ৱিকীৱি KṭR mnvh` Kṭi |

thgb tZvgiv mevB Rvb cixṇṇi djvdj,ṭjv AvRKvj tZvgiv Bৱিভউ e'envi Kṭi gṭZP gṭa` thgb tZvgiv mevB Rvb cixṇṇi djvdj,ṭjv AvRKvj tZvgiv Bৱিভউ



ৱিকীৱ্য WU Kg IṭqemBṭU AṭbK ৱিকীৱি bṭv welṭq iKwCwoṭq_vṭKb|

e'envi Kṭi gṭZP gṭa` RvbṭZ cvi | ৱিকীৱ্য AvtMi thW UQj AṭbK KwVb| Mfxi Mōtg ev cōZ`GjvKṭv hviv UQj cixṇṇi djvdj Rvbvi Rṭb` Zṭi` i AṭbK c_ cwo w`tq knṭi AvmṭZ nṭZv- AvRKvj tḡevBj tUwj ṭdvṭbi GKwU tḡvṭmR ev Bৱিভউ GKwU ṭṭṭB cixṇṇi djvdj tRṭb hvl qv hvq|

cixṇṇi djvdj Rvbvi e'vcvṭi Bৱিভউ thiKg AṭbK eo fṭgKv iṭL- ṭḡ Kṭj R wekṭe`vjṭq fṭZP e'vcvṭi Bৱিভউ AṭbK fṭgKv iṭLṭZ cvi | tZvgiv tḡevBj tUwj ṭdvṭ w`tq wekṭe`vjṭq fṭZṭiṭRṭṭṭbi K_v iṭbQ- ৱিকীৱ্য thiKg Bৱিভউ e'envi Kṭi jṇṇ jṇṇ cixṇṇi djvdj Rvbvi e'vcvṭi Bৱিভউ thiKg AṭbK eo fṭgKv iṭL- ṭḡ Kṭj R wekṭe`vjṭq fṭZP e'vcvṭi Bৱিভউ AṭbK fṭgKv iṭLṭZ cvi | tZvgiv

tgvevBj tUwj tdlv w`tq wekpe`vj tq fWZ©tiwRt÷kbi K_v i`tbQ- wK tmi Kg BvUvibU e`envi Kti I j q j q tQj tqtqi fWZ©cixqvi Rtb` tiwRt÷kb Kti t`qv nq! Avgvt`i t`tki RvZxq wekpe`vj tq cQq Pvi j q wkqiv_®fWZ©cixqvi t`q- tZvgiv Kx Rvb GB Pvi j q cixqiv_®mevB fWZP Rtb` BvUvibU e`envi Kti?

RvZxq wekpe`vj tq fWZP Avte`bKvix cQq Pvi j q QvQvixK Z_ chv³ e`envi Kti cQq Kiv nqQj | GKUv wkqiv cQZvib fWZ©hI qvi AvtM mevB tmB cQZvib mæutK©GKUv Z_ RvbZ Pvq | AvtM tmB Z_ Rvbi Rtb` GKRb gvb|tK AtbK `i t`tK tmLvib AvmtZ nZv- GLb BvUvibU e`envi Kti cW_xi th tKvibv cQš tKvibv wkqiv cQZvibi Z_ GKRb Nti etm tRtb wbtZ cvti |

chv³i Kvity BtZvgt` Avgiv AtbK ai`bi mthvM mæta e`envi KiwQ- wKQv tbi tfZti Avgvt`i t`tkB Avgiv Avtiv bvbv ai`bi bZb bZb mthvM tctZ hwrQ | Avgvt`i wekpe`vj q,tj vtZ fivPqvj Kvmitg `Zwi nZ hv`Q thwU mviv t`tki me wekpe`vj tqi mv_ h³ nte | GKUv wekpe`vj tq GKRb wkqiv hLb covteb ZLb tmUv i`agv Zvi Kvmitg Avmv Aí KqRb QvQvix Zvi mvgtb etm tmUv i`bte bv- fivPqvj Kvmitg etm nqtZv mviv t`tki AtbK QvQvix tmUv i`bte |

tgwWtKj Ktj tRi QvQvixiv AtbK `i t`tK nqtZv GKUv RvUj Acvtikb wbtRi tPvtL t`Liz cvi te | `i cvnvtoi Dci emvibv GKUv tUwj t`cvtci tfZi w`tq GKRb wkqiv_® tmSi RMtZi tKvibv Mh ev `i M`vj w`ci tKvibv bqtK chqey KiZ cvi te | AtbK AvaybK GKUv j `vetiUvi i tKvibv GKUv G- tciw tgvU GKUv Qv Zvi Nti etm Kti tdj tZ cvi te | `g j vBtehi tZ th eBUv tbB gütZP gvta` tmB eBUv GKRb wkqiv_®covi Rtb` wbtq AvmtZ cvi te |

meWQyt`tL i`tb gtb nq hLb BvUvibU wQj bv ZLb gvb| tKgb Kti tj Lv cov Ki Z?

`j MZ KvR
AvR t`tK GKk eQi cti wkqivi e`vcti Z_ chv³ Kx fvgKv ivLiz cvi ti tmUv
Kí bv Kti GKUv t`qvj cwi Kv tei Ki |

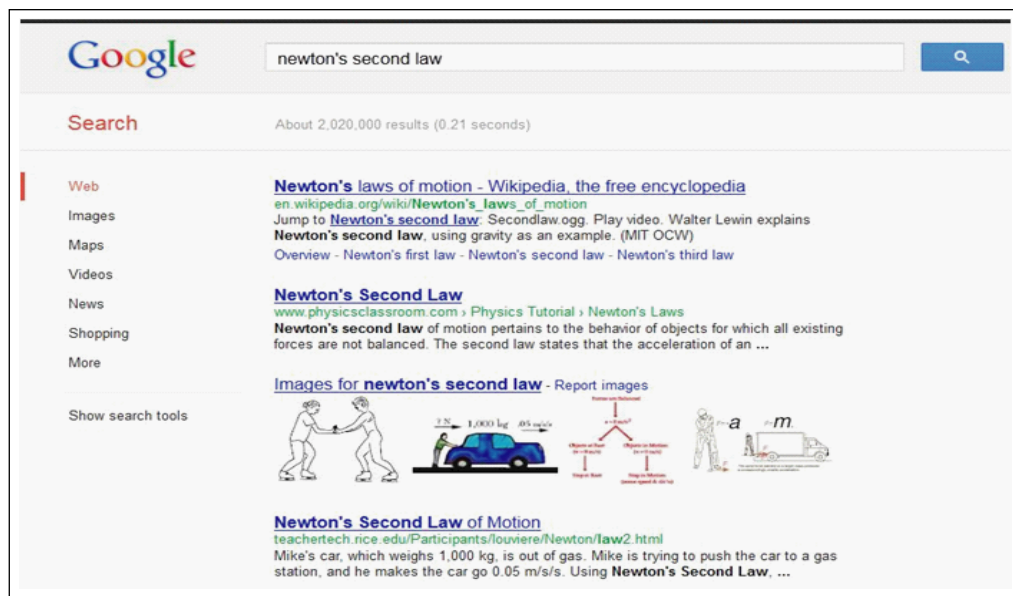


bZb wLj vg : fivPqvj Kvmitg, tUwj t`vc, M`vj w` |

tKej BstiwRtZ bq, evj v fvlvZl GLb BvUitbu wkqKv Kvhg weKmkZ ntQ| evsj vt`k miKvti c q t_tK j chiqi me cV'cy-K GLb B-eK AvKvti cvl hv hvq| www.ebook.gov.bd mvBU t_tK Zyg tZvgi eB-Gi BeK ms`ciY bmgq wbZ cvtiv|

evsj v fvlvZl GLb wkqKv msvs-vefbetKvmPvjy ntqtQ| GiKg GKw mvBU nj <http://www.shikkhok.com/> GLvb MvYZ, cwikewAvb, KvuDUvi tKskj BZ`w i vefbetKvmKivi mthvM AvtQ|

Abvb` th tKvbn wltqi gtZv BvUitbtU wkqKv msvs-th tKvbn Z_ Rvbi mnR Dcvq ntjv tKvb GKU mvPBwAb G mvuKZ Z_ Zjvk Kiv| Z_ tLvRvi Rb` mVKfvte AbmUvbw wj LtZ nq|



GLvb mvPBwAb Mtj wDUtbi Mwzi m msvs-Z_ tLvRvi GKw D`vniY t`Lvbn nj | t`Lv hv`Q cQ 20 j qvwaK l tqemvBU ev wfwl tZ G msvs-Z_ itqtQ| tmLvb t_tK Zyg Z_ tetQ wbZ cvtiv|

me mvPBwAbB mVKfvte wj LtZ cvitj th tKvbn Z_ mvtK`AmsL` Zt`i wj sK cvl qv hvq| GRb` BvUitbu t_tK Z_ tei Kivi KvR mvPBwAb e`envti `q ntZ nq| GB `qZv ARB mnR nq hw` Zyg wbgqZ Zv e`envi Ki |

metPtq eo gþ wekþKvl nj DBwKwWqv| GuU mviv weþkþi gvbyl t`^vQvkþgi wfvEþZ ^Zwi KþiþQb Ges µgvMZ mg× Kþi Ptj þQb| cðq `þKði I tenk fvlvq GuU Pvj y iþqþQ| Zþe Avgvþ` i Rb` Gi BstiwR I evsjv wekþKvl wLpB ` i Kwii | BstiwR fvlvi DBwKwWqvþZ 40 j þqþQ I tenk wbeÜ iþqþQ hvi AþbK, þjv mivmwi wkvþv mþvšþ cþZ`K DBwKwWqvþZ AbjvÜbv Kivi GKwU ev. iþqþQ| tmLvþb tZvgvi KwþqZ kã ev kãvej x wj Ltj Zyq GB mþvšþ-wbeÜ ev wbeÜvej x t` LtZ cvþe| evsjv fvlvq DBwKwWqv GLþbv ZZUv mg× bq| GZ cðq 23 nrvþi i tenk wbeÜ AvþQ Ges tmLvþb tþK tZvgvi KwþqZ Z` tçþZl cvþiv|

4| Lvb GKvþWvg (<http://www.khanacademy.org/>) eZþvb weþkþi metPtq Rbwçð wkvþv mvBU ntþv <http://www.khanacademy.org/> Lvb GKvþWvgi cðZðvZv, evsjvþ` kx estkvþZ, wkvþve` mvj gvb Lvb 2006 mvþj GB mvBUw cðZðv Kþi b| GB mvBþU wZvb cðq 3 nrvvi 400wU tQvU tQvU wfvWI i gvaþg wevfþwvþelq e`vL`v KþiþQb| Gi gþa` iþqþQ MwYZ, BwZnm, `v`þmev, c`v_þeÁvb, imvqb, Rxewþvb, A_þwZ, gnvKvk wþvb, KwþvDUvi wþvb cþwZ| GB tQvU wfvWI þjvþZ mvj gvb Lvb Zvi wþþRi gþZv Kþi wvþq þjvþK mnRfvþe Zþj atþþQb| Zvi wfvWI þjv GiB gþa` 18 tKwUil tenkevi WvDbþj wv ntþþQ| GLvb tþK Zyq tZvgvi ` i Kwii wfvWI wv WvDbþj wv Kþi wþþZ cvþiv|

5| evsjv fvlvq Lvb GKvþWvgi wfvWI (<http://khanacademy.org/intl/bn>) mvj gvb Lvþbi me wfvWI BstiwR fvlvþZ| Zþe, Avþþ` i wvþq þjv GB wfvWI þjv weþkþi wevfþwvþelq Abjv Z ntþþQ hvi gþa` evsjv fvlv iþqþQ| wþvþbi þjmb þjvi evsjv Abjv` Zyq GB wKvþvq cvþe - GLvbKvi wfvWI þjv Rxewþvb, imvqb, c`v_þeÁvb Ges `Reimvqb GB Pvi fvþM fvM Kiv AvþQ| cþZ`K wj stþi i iþþZ Zwj Kv iþqþQ hv tþK cð` gþZv wfvWI evQvB Kiv hvq| Avi MwþþZi wfvWI þjv cvlqv hvþe GB wKvþvq <http://www.youtube.com/user/KhanAcademyBangla> GLvþb 1258wU wfvWI iþqþQ| Zyq tZvgvi cð` gþZv exRMwYZ, cvwUMwYZ, cwi msL`vb, wþþKvYwvZ BZ`w` i wfvWI tþK tZvgvi ` i Kwii wfvWI wv WvDbþj wv Kþi tþLvi KvþR j vMvþZ cvþiv|

6| <http://www.bbcjanala.com/> GuU GKwU BstiwR fvlv tþLvi mvBU| BþvviþþU BstiwR fvlv tþLvi ARm³mvBU iþqþQ| Zþe, GB mvBUw Avgvþ` i t`þki DcþhvMx D`vniY Ges e`vL`vi Kvþþ tþk tenk Rbwçð| GB mvBþU BstiwR `qZv evþi Rb` tekvKQy PgrKvi tKvm®iþqþQ| BþvviþþU webvgþj` tiwRþ÷kþbi gvaþg th tþKD Lp mntRB GB tKvm®þjvþZ Ask wþþZ cvþi| tKvm®tþt tKvm®wþþcvU®ev tKvm®mgvcþx wçðU Kþi tþlqv hvq| tZvgvi BstiwRi `qZv evovþbvi Rb` Zyq GB tKvm®tiwRþ÷kb Kþi wþþZ cvþiv|

7| <http://mathforum.org/dr.math/> Dr Math GKwU Rbwçð MwYZ wvþqK mvBU| GB mvBþU `j chþqi MwþþZi wevfþwvþelq mnR Kþi e`vL`v Kiv ntþþQ| ht_ó D`vniY

Ges ৱেবফৰ্মেটে exRMmYZ, R'wgmZ, K'vj Kj vtmি bvbvb ৱেলq Ztj aiv ntqtQ| GB mvBtU tKvtr ৱেলq cvl qv bv tMtj Zv Rvbvi Rb' Dr Math tK ckaKiv hvq|

8| <http://www.matholympiad.org.bd/forum> GwU GKwU MmYZ ৱেলqK ckaEi, Avtj vPbvi mvBU| evsj vt`k MmYZ Awj wuqvWwi ৱিকীK I t'~OvtmeKMY GwU cwi Pvj bv Ktib| evsj vt`k I AvSRmZK MmYZ Awj wuqvWwi ৱেবফৰ্মMmYwZK mgm'v wbtq GB tdivgmUtZ Avtj vPbv Kiv ntq _vtK| G Ovov GLvtb ৱেবফৰ্মmgq ckaZthwMZvI AbyoZ nq|

9| <http://www.learningscience.org/> nvZ Kj tg ৱেবফৰ্মcixv-ibixvI gva'tg ৱেÁvbi ৱেবফৰ্মৱেলq m'utK'Rvtr hvq|

10| HwZnmK tgSwj K M's' mgr: AvRtKi ÁvweÁvbi DbwZi gtj itqtQ ৱেবফৰ্মৱেÁvbi I ৱিকীৱে`t`i wekvj Ae`vb| ৱেবফৰ্মৱেÁvbx Ges mgvR ms`<vi KMY Zvt`i AwfÁZvi Avtj vtK wek'ÁvbtK GwMtq wbtq tMtQb| Zvt`i tmB mKj ৱেলq Ašf' ntqtQ Zvt`i wj wLZ eBtq| Bৱি তথ্যই Gie tgSwj K M's,tjvi wWwRUvj ms`<iY cvl qv hvq| GiKg KtqKwU M'si wj sK wbtP t`l qv nj :

BDwKwWi Gwj tgUum	http://aleph0.clarku.edu/~djoyce/java/elements/bookI/bookI.html
wbDUtbi wcaYwcv g'v_tgUwKv	http://www.scribd.com/doc/1905837/English-Translation-Version-Philosophi-Naturalis-Principia-Mathematica
WwIDBtbi w` Aww wRb Ae t`úwmm	http://www.talkorigins.org/faqs/origin.html

GBifc cka mKj ৱেল'vZ M'si wWwRUvj ms`<iY GLb Bৱি তথ্যই t_tK ৱেবvgtj' msMh Kiv hvq| mwVKfite mvP'wAb e'envi Kti Zyg tmUv tei Kti wbtZ cvi |

bgpv cñe

1. tKvb cÖZöþbi I tqemvBU ntZ evsj vt`tki `g I gv`tmvi cW`cý-K WvDbtj vW Kiv hvq?

K. XvKv wk¶v tevW©

L. gv`tmv wk¶v tevW©

M. Kwi Mix wk¶v tevW©

N. RvZxq wk¶vµg I cW`cý-K tevW©

2. I tqe mvBtU `g I gv`tmvi th cW`cý-K,tj v cvl qv hvq tm,tj vtK Kx etj ?

K. B-eK

L. BvUv tBU eK

M. GvmmUwe eK

N. wWRUvj eK

3. BvUv tbtUi mrvth` -

i. cVvel tq mrvqZv cvl qv hvq

ii. fWZ`Kvhµg m=úbæKiv hvq

iii. Abj vBtb Kvm Kiv hvq

wbþPi tKvbU mWVK?

K. i I ii

L. i I iii

M. ii I iii

N. i, ii I iii

wbþPi Abt`Q`wU cto 4 I 5 b=ft cñe DEi `vl :

MwYZ I BstivRtZ Awb cñqB Lvirc djvdj Kti | tLtZ nq gv-evevi eKwb | cÜvMZfvte MwYZ wkLtZ Zvi fvtjv j vtM bv | Avbþ`i mvþ_ tm MwYZ wkLtZ Pvq | Awbi B`Qv tm Abt`i gZ MwYZ wkLt MwYZ Awj w=úqvW Ask wbþq mevBtK ZvK j wMtq w`te |

4. আলি জব্বারের মনোভাবের মূল কথাটি -

- i. বিশ্ববিদ্যালয়কে গড়া
- ii. তত্ত্ববিদ্যাকে গড়া এবং এর মূল্য
- iii. বিশ্ববিদ্যালয়কে গড়া

ৱিক্টোরিয়া বিশ্ববিদ্যালয়?

- K. i ও ii
- L. i ও iii
- M. ii ও iii
- N. i, ii ও iii

5. আলি জব্বারের মনোভাবের মূল কথাটি -

- K. www.matholympiad.org.bd
- L. www.khanacademy.org
- M. www.mathforum.org/dr.math/
- N. www.khanacademy.org/intl/bn/

মুদ্রিত



রূপকল্প-২০২১ বাস্তবায়নে তথ্যপ্রযুক্তির কোনো বিকল্প নেই
-মাননীয় প্রধানমন্ত্রী শেখ হাসিনা



২০১৭ শিক্ষাবর্ষ থেকে সরকার কর্তৃক বিনামূল্যে বিতরণের জন্য

মুদ্রণে :