

4-/kkjkfo | r vkf.k pcdRo

i'u- 1½ [kkyhy fn?kkRrjh i'ukph mRrj fygk

fVik fygk-

1½ foHkokrj

mRrj % okgdKp;k nku Vdke/khy foHkokP;k Qjdkyk foHkokrj Eg.krkr-
tj ,[kknk m".k inkFk FkM inkFkkP;k lidkr Boyk rj m".k
inkFkcdMu FkM inkFkcdM m".krp ogu gkr- gop vkf.k ik.;kp ogu
n[khy ugeh tkLr {kerdMu deh {kerdM Eg.ktp ojP;k ikrGhdMu
[kkyP;k ikrGhdM gkr vlr- ;ko#u vl letr dh] dk.kR;kg
inkFkcp ogu g ugeh tkLr {kerdMu deh {kerdM gkr- R;kul kj
okgd kru gk.kkj fo|r ogu l/nk tkLr {kerdMu deh {kerdM gkr
vl.kkj Eg.ktp fo|r ?kVkp;k byDVkMe/; tj fo|r{kerk fhkUuk vly
rj fotp ogu gkÅ 'kdr- fotp ogu /kukxkdMu __.kkxkdM gkr
vlr- vkf.k ghp fo|r/kkjph ldreku; fn'kk vkg-

foHkokrj OgkYVehVjP;k lkg;;ku ekty tkr- foHkokrj kpi SI
,dd OgkYV (V) vlr-

2½ fo | r fLFkfrd foHko

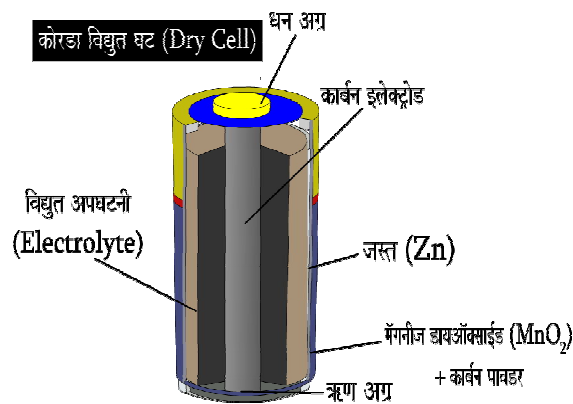
mRrj % ik.kh fdok no inkFk mp ikrGhru [kkyhy ikrGhdM okgrkr-
m".krk vf/kd rkiekudMu deh rkiekudM okgr- rlp /kuiHkkjkph
ioRrh vf/kd fo|rikrGhP;k fcniklu deh fo|rikrGhP;k fcni;r
okg.;kph vlr- fo|riHkkjkP;k ogukph fn'kk Bjfo.kkU;k ;k
fo|rikrGhl fo|r fLFkfrd foHko vl Eg.krkr-

3½ fo | r ?kV

mRrj % ,[kkn;k ifjiFkke/; lrr fo|riHkkjkpk iokg fuek.k
dj.;k lkbh ,dk L=krkph xjt vlr vl lol k/kkj.k l/ku Eg.kt
fo|r?kV gk;- euxVh ?kM;kGkiklu ik.kcM;ki;r vud ;=ke/;
fo|r?kV okijy tkrkr-

fo|r?kVkp e[; dk; & R;kP;k nku Vdke/khy foHkokrj dk;e
jk[k.k g gk;- fo|riHkkjkoj dk; d#u fo|r?kV foHkokrj dk;e
jk[krkr-

4% dkjMk fo|r ?kV
mRrj&



dkjM;k fo|r ?kVke/; tLrkp HkkM __.k /kokp rj dkcu dkMh /ku /kokp dk; djr-

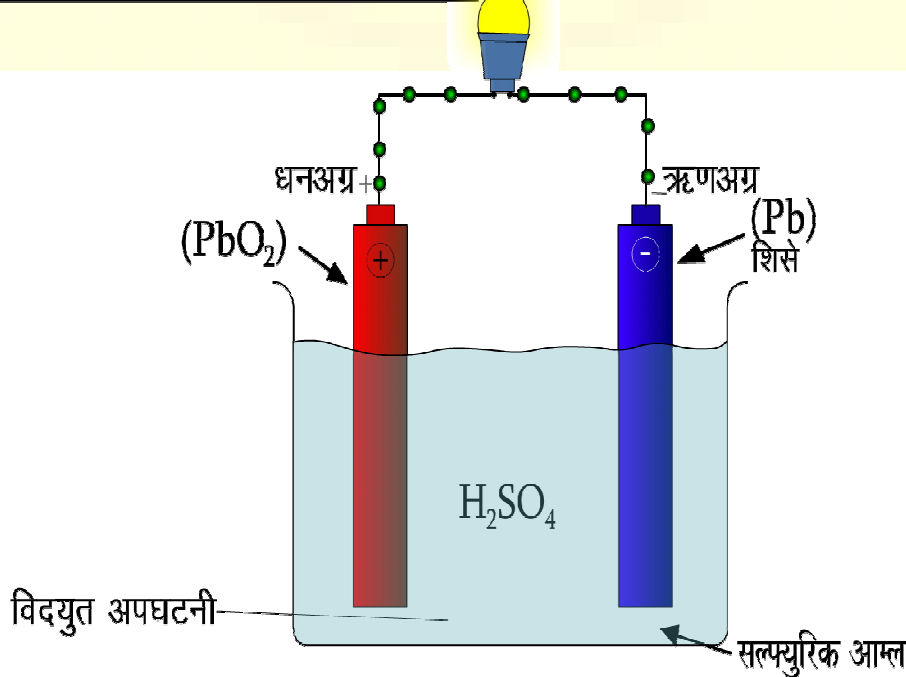
xkQkbV & eXkuht Mk;kDIkbM (MnO₂) p feJ.k rlp vekfu;e DykjbM] f>d DykjbM o ykdMpk HkIk g inkFk ;ke/; okijy tkrkr-

;k ?kVke/; nko.kkpk okij dyk tkr ukgh- Eg.ku R;kI funo ?kV vlgH Eg.krkr-

mi;kx % jMhvk lpe/;] fhkrhojhy ?kM;kGke/;] dejk] fotjhe/; g dkjM fo|r ?kV okijy tkrkr-

i'u 2% yM& vKEy fo|r ?kVkpH jpuk o dk; vkdrhlg Li"V djkmRrj &

लेड आम्ल विद्युत घट (Lead-Acid Cell)



यम & वक्येय फोर्?कVkr f'k';kp (pb) ,d fo|rvx (electrode) o yM Mk;kDI kbM (pbO₂) p nIj fo|rvx fojy IY¶;fjd vक्येयkr cMfoyy vlr- pbO₂ ;k fo|rvxkoj /ku iHkkj] rj pb g;k fo|rvxkoj __.kiHkkj vlrk- ;k nkUghe/khy foHkokrj lekj 2V brd vlr- ?kVke/khy inkFkkP;k jklk;fud vfHkfØ;u nkUgh fo|rvxkoj fo|riHkkj r;kj gkrk-

;k idkjP;k fo|r?kVkp ekBk fo|riokg ijfo.;kph {kerk vlr- **mi;kx** % ekVkj] Vd] ekVkjlk;dyh] v[kM fo|r'kDrh ijoBk;= (UPS) ;ke/; **यम&वक्येय** फोर्?कV okijy tkrk-

i'u 3fo|r ifjiFk (Electric Circuit) ph jpuk vdrhlg Li"V djkmRrj&



vdrhe/; nk[kfoY;kiek.k ?kV/kkj**d** (Cell holder) fo|r fnok %cYc% o dG tkM.khP;k fo|rokgd rkjkuh tkMY;koj o ?kV /kkjdke/; dkjMk fo|r?kV clfoY;kI cYc idk'krk- cYc e/ku fo|riokg okgrk- o cYc idk'krk- ?kV dk<u ?krkp cYce/khy fo|riokg [kMhr gkrk o cYcp idk'k.k cn gkr- ;k idkjP;k fo|r ?kVdkP;k tkM.khyk fo|r ifjiFk vI Eg.krk-

fo|rifjiFkke/; fo|r midj.kkIkBh fofok fpUgkpk okij dyk tkrk-

अ. नं	विद्युत उपकरण	चिन्ह	उपयोग
1	विद्युत घट		विभवांतर निर्माण करण्यासाठी
2	बॅटरी		जास्त विभवांतर निर्माण करण्यासाठी
3	अॅमीटर		विद्युतधारा मोजण्यासाठी
4	व्होल्ट मीटर		विभवांतर मोजण्यासाठी
5	गॅल्व्हनोमीटर		विद्युतधारा आहे किंवा नाही हे तपासण्यासाठी

i'u 4½ fo|r pcd dl r;kj djrkr r vkdrhlg nk[kok-mRrj &

धारा विद्युतचे चुंबकीय परिणाम (Magnetic Effects Of Electric Current)

,[kknk ehVjHkj fo|rjk/kh vkoj.k vlyyh rkC;kph yofpd rkj ?kÅu ,dk ykc Løoj dlu xMkGk- rkjph nku Vkd vkdrhr nk[kfoY;kiek.k ifjiFkkr fo|r?kV o dGgh tkMk- LØP;k toG 2&4 yk[kMh Vkp.;k Bok- vkrk dG cn d#u ifjiFkkr fo|riokg l# dj- Vkp.;k LØP;k Vdkyk fpdVyY;k fnlrhy- dG [kyh djrkp Vkp.;k [kkyh iMrkr- v'kk i/nrhu fo|rpcd r;kj djrkr-

i'u 5½ jk/kkph ,dlj tkM.kh fo"kh ekfgrh fygk-

mRrj % 1½ fo|r ifjiFkke/; jk/kkph ,dlj tkM.kh dY;k l iR;d Hkkxkru okg.kkjh fo|r/kkj lku vlr-

2½ ,dlj tkM.khe/; ,d.k foHkokrj iR;d jk/kkP;k njE;ku vlyY;k foHkokrjP;k cjtbrd vlr-

3½ ,dlj tkM.khrhy ifj.kkeh jk/k lo jk/kkP;k cjt brdk vlrk-

4½ ,dlj tkM.khPkk ifj.kkeh jk/k ofDrd jk/kkP;k eY;ki{kk tkLr vlrk-

5½ iR;d jk/kkP;k njE;ku vlyy foHkokrj R;k jk/kk'kh lekuikrh vlr
Eg.ktp foHkokrj to< tkLr ro<k jk/k tkLr vlrk-

6½ fo|rifjiFkke/; jk/k ok<fo.;kIkBh ,dlj tkM.khpk okij dyk
tkrk- mnk- ¶; t ¼ forGrkj ½

i'u 6½ pcdkp x.k/ke fygk-

mRrj % 1½ pcdkp vkd"k.k x.k/ke %& ykgd.k pcdkdM nkUgh ck tP;k
VkdkdM ¼ /kokdM ½ vkdf"kr gkrkr-

2½ fn'kkn'kh x.k/ke %& eDri.k fQ# 'kd.kkj pcd iFohoj dkBgh
Vxu Boyk rjh rk nf{k.k & mRrj fn'krp fLFkj jkgrk-

3½ pcdkp /ko & Vxu BoyY;k pcdkp

1½ tk /ko mRrj fn'kk nk[kfork] rk pcdkp mRrj /ko (N) gk;-

2½ tk /ko nf{k.k fn'kk nk[kfork] rk pcdkp nf{k.k /ko (S) gk;-

4½ pcdkP;k /koke/khy vU;kU;fØ;k %&

v½ pcdkP;k l tkrh; /koke/; (N-N) fdok (S-S) ifrd"k.k vlr-

c½ fotkrh; /koke/; (N-S) vkd"k.k vlr-

i'u 7 ¼1½ okgdkp idkj fygk-

mRrj % okgdkp pkj idkj vkgr-

v½ lokgd c½ nokgd@ folokgd d½ v/kokgd M½ vfrokgd

1½ lokgd& T;k okgdkp jk/k vfr'k; deh vlrk- R;kuk lokgd vl
Eg.krkr-mnk- pknh] lku] vY;fefuve] rkc b-

2½ nokgd & T;k okgdkp jk/k vfr'k; tkLr vlrk- R;kuk nokgd
fdok folokgd Eg.krkr-mnk- jcj] ykdM] dkp] dkxn] lyLVhd b-

3½ v/kokgd & T;k okgdkp jk/k lokgdki{kk tkLr ijr nokgdki{kk
deh vlrk- R;kuk v/kokgd vl Eg.krkr- mnk-& flyhdku] tefuve]
xfyve] dfFky] fofok lfeJ rlp /kkrp vkDIkbM b-

4½ vfrokgd &T;k inkFkkp jk/k rkieu deh dY;kI vfr'k; deh
gkrk R;kuk vfrokgd vl Eg.krkr-

2½ pcdkp mi; kx fygk-

mRrj % 1½ pcdkp mi; kx gdk;=r fn'kkn'kd Eg.ku gkrk

2½ uykdrh pcdkp o iVh pcdkp mi; kx i; kx 'kkGr rlp fo|r tfu=ke/; gkrk-

3½ lph pcdkp mi; kx fn'kkn'kd Eg.ku i; kx'kkGr gkrk-

4½ pdrh pcdkp mi; kx fof/k fo|r midj.kke/; gkrk-

5½ Vh- Ogh- vkf.k lx.kdkP; k ekfuVj e/khy dFkkM j V; cel/; ; k pcdkp mi; kx gkrk-

6½ fo|r ekVkj] tujVj vkf.k byDVhd fxVkje/; ; kpk mi; kx gkrk-

i'u 8½ dkj.k fygk-

1½ dkjMk fo|r?kV gk okijk; yk lk; hpk vlrk-

mRrj % 1½ no inkFkkpk okij dj.kkú; k fo|r?kVp; k ryur fo|r?kVph lkBo.k dkye; knk vf/kd vlr-

2½ dkjM fo|r?kV mHk] vkMo] frji] dlgh Bork ; rkr o py lk/kuke/; gh lgti.k okijrk ; rkr- Eg.kup dkjMk fo|r?kV okijk; yk lk; hpk vlrk-

i'u 9½ ,dk okD; kr mRrj fygk-

**1½ /kkjk fo|r Eg.kt dk; **

mRrj % okgdkrhy eDr byDVku xfreku >kY; k l fo|riHkkj iokgh gkÅu okgdkr fo|r/kkjk fuek.k gkr- xfreku fo|r iHkkjk"kh lc/khr Åtyk /kkjk fo|r Eg.krkr-

2½ fo|r Åtp idkj lxxk-

mRrj % fo|r Åtp fLFkrhd fo|r o /kkjk fo|r vl nku idkj vkgr-

**3½ fo|r {k= Eg.kt dk; **

mRrj % fo|r iHkkjkHkkorhP; k {k=k l fo|r {k= vl Eg.krkr-

**4½ okgd Eg.kt dk; **

mRrj % T; k inkFkkr fo|r iHkkj ,dk VdkdMu n lÚ; k VdkdM lgt iokfgr gkrk] R; k l okgd vl Eg.krkr-

5% okgd^{dpk} jk/k Eg.k t dk;\

mRrj % fo|r iokgk l vMFkGk fuek.k dj.;kP;k okgd^{dpk};k x.k/kek l jk/k Eg.krkr-

6% fo|r/kkj k lrr u y^{kx.kkj}h midj.k dk.krh\

mRrj % fo|r ?kV k o rkjk;= v'kk midj.kkr lrr fo|r/kkj k y^{xr} ukgh-

7% Økfrd rkieku Eg.k t dk;\

mRrj % T;k fof'k"V dehr deh rkieku l vfrokgd^{dpk} jk/k 'kU; gkrk-R;k rkieku l Økfrd rkieku vl Eg.krkr-

8% fo|r okgd dk.kR;k i/nrhu iHkkfjr dyk tkrk\

mRrj % ?k" k.k] ogu] o ioru ;k rhu i/nrhuh fo|r okgd iHkkfjr dyk tkrk-

i'u 10% lglc/k vkG[^{kk}-

1% byDVku % __.k iHkkfjr d.k % % iVku % %----- .

mRrj % /ku iHkkfjr d.k

2% dkjMk fo|r?kV %----- % % yM vkEy ?kV % f'k l

mRrj % tLr

i'u 11% [kkyhy fo/kku pd dh cjkcj r fygk-

1% fo|r iokg gh vfn'k jk'kh vkg-

mRrj % cjkcj

2% fo|r ?kVkeG nku Vkdke/khy foHkokrj dk;e jk[krk ;r ukgh-

mRrj % pd %fo|r ?kVkeG nku Vkdke/khy foHkokrj dk;e jk[krk ;r%

3% tefuvej xkQkbV g v/kokgd vgr-

mRrj % cjkcj

4% fo|r/kkj k vehVjP;k lkgk,;ku vEihvje/; ektyh tkr-

mRrj % cjkcj

i'u 12½ 0;k[;k fygk-

1½ fo|r iHkkj

mRrj % fo|r iHkkj Eg.k t okgd kru okg.kkjh fo|r/kkj k vkf.k dkyo/kh ;kpk x.kkdj gk;-

2½ vfEivj

mRrj % okgd kru ,d l d nke/; 1 dyke brdk fo|r iHkkj okgu tkrk rOgk R;kru okg.kkjh fo|r/kkj ,d vfEivj vkg vl Eg.krkr-

3½ fo|r ifjiFk

mRrj % fo|r ?kV kP;k nkUgh Vdke/; okgdrkjy t kMyY;k fofok fo|r midj.kkpk ekx Eg.ktp fo|r ifjiFk gk;-

4½ 0gkYV

mRrj % ,d dyke fo|r iHkkj kp okgd kru ogu gkrkuk ,d T;y dk; ?kMr vly rj okgd kP;k nku Vdke/khy foHkokrj ,d 0gkYV vkg vl Eg.krkr-
