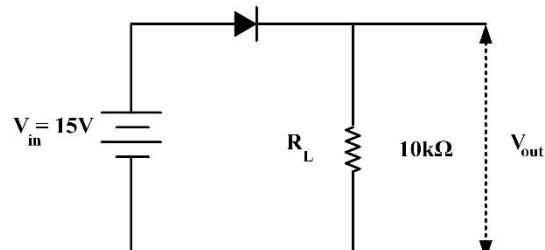


## 1' – ikaē Èfhdavh wdYs%; .eg,q

1.1'1 rEmfha ±lafjk mßm:phys Èfhdavh

- i. mßmQ¾K Èfhdavhla fia i,ld"
- ii. My name is 0.7Vjk is,slka Èfhdv a hla fia "i,ld"

m%;sodk fjda,aàh;dj oR<sub>L</sub> yryd Odrdj o Èfhdavfhka W;ai¾ckh jk laIu;dj o fidhkak'



1.1 දෙපය

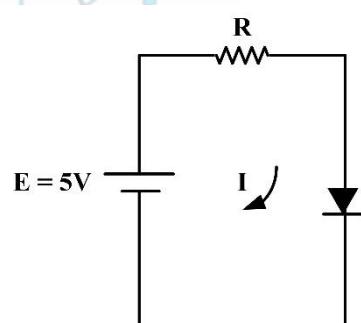


2.1'2 rEmfha ±lafjk is,slka Èfhdv a h"tys fmr keUqreI – V

, dlaIKsl jl%physV = 0.7V ^oKáphys& mj;ajd .ekSu i`oyd

ta ;=<ska1mAju Odrdjla heúh hq;= fō'

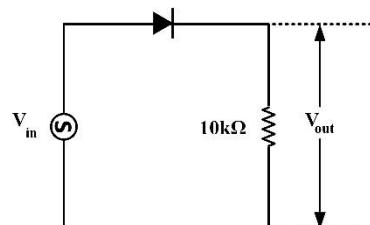
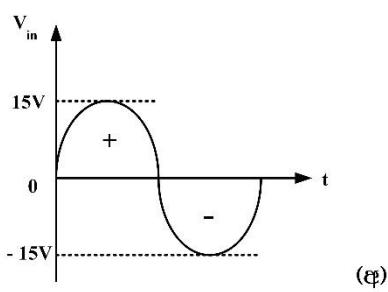
- i. Èfhdavh ;=<ska5mA Odrdjla heùu i`oyd wjYH jkR m%;sfrdaOfha wh o"
- ii. RI`oyd fuu wh we;s úg Odrdj1mAju w.phys mj;ajd . ekSu i`oydEnegßhg ;sìh yels wju fjda,aàh;dj o fidhkak'



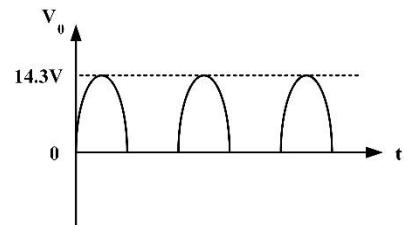
1.2 දෙපය

3.1'3 ^w& rEmfha ±lafjkafka úNj neiau ^oKá fjda,aàh;dj&0.7Vjk is,slka Èfhdavhla wvx.= mßm:hls' l=t fjda,aàh;dj15VjQ m%;Hdj¾;l (ac)fjda,aàh;dm%Njhlska m%odk fjda,aàh;dj iemfha'

- i. m%;sodk fjda,aàh;dfjys ;rx. yevh yd tys l=t wh o"
- ii. m%odk ;rx.phys Ok w¾O pl%hg wkqrEm jk w¾Ofha § m%;os dk Odrdfjys l=t wh o"
- iii. m%odk ;rx.phys iDK w¾O pl%fha§ Èfhdavh yryd Wmßu miq fjda,aàh;dj o fidhkak'



1.3 දෙපය

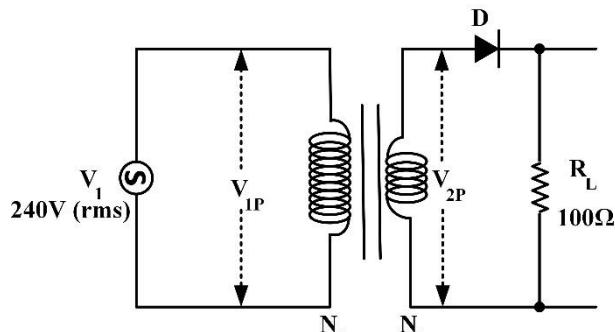


(a)

#### 4.1'4 rEmfha ±lafjk w<sup>¾</sup>O;-rx. iDcqldrl

mßm:phys wjlr mßudKulg iemfhk  
m%odk fjda,aàh;dj 240V (rms) fõ'

- mßKdulphys fmdgj, wkqmd;h8:1ls'  
 i. oaù;shsl fjda,aàh;dfjys l='t wh o  
 ii. Èfhdavh mßmQ<sup>¾</sup>K tlla fia i,ld" Ndr  
 m%;sfrdaOlh yryd we;sjk fjda,aàh;d  
 w<sup>¾</sup>O;-rx.phys Wmßu wh" ir, Odrd  
 (dc)fjda,aàh;dj yd ir, Odrdj o"  
 iii. Èfhdavh yryd fhfok Wmßu miq fjda,aàh;dj o fidhkak' Èfhdavh yryd úNj neiu a Yk Hh  
 I'm sorry.



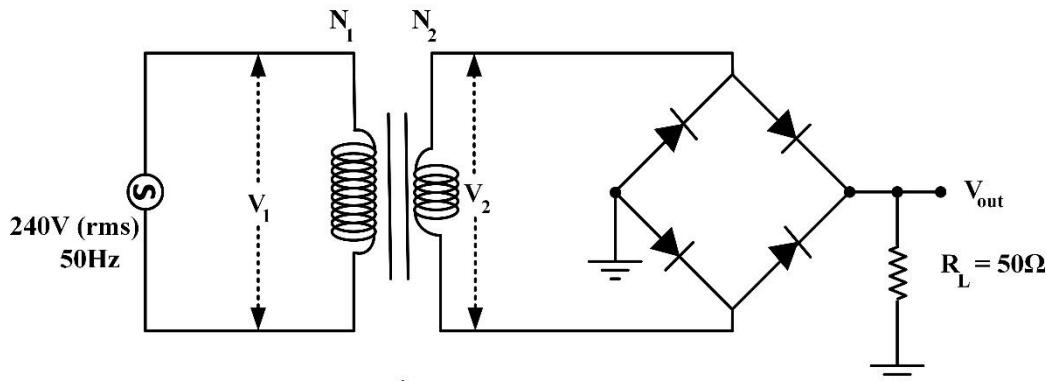
1.4 දෙපය



#### 5.1'5 rEmfka ±lafjkafka Èfhdav y;rla fh¥ fia;= iDcqldrlhl mßm:hls' wjlr mßKdulhg fhfok

m%odk fjda,aàh;dj"240V(rms), 50Hzfõ' mßKdulphys fmdgj, wkqmd;h8:1ls'

- i. oaú;Shsl fjda,aàh;dfjys l='t wh"  
 ii. Ndr m%;sfrdaOlh yryd ir, Odrd (dc)fjda,aàh;dj yd ir, Odrdj iy  
 iii. tla tla Èfhdavh yryd Wmßu miq fjda,aàh;dj fidhkak'

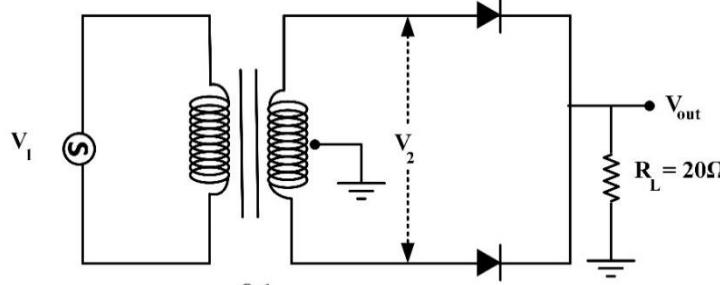


1.5 දෙපය

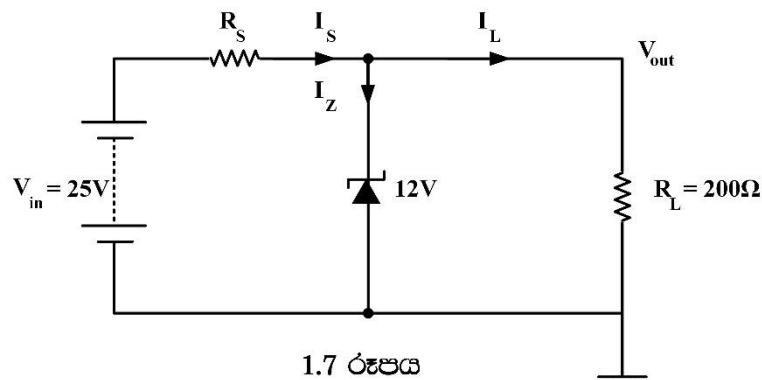
#### 6.1'6 rEmfha ±lafjk mQ<sup>¾</sup>K ;rx. iDcqldrlphys wjlr mßKdulhg fhfok m%odk fjda,aàh;dj V<sub>1</sub>= 240V

rmsoh you are ixLHd;h50Hzo fõ' mßKdulphys fmdgj, wkqmd;h8:1ls'R<sub>L</sub>Ndr

m%;sfrdaOh yryd we;s jk fjda,aàh;d ;rx.phys Wmßu fjda,aàh;dj o ixLHd;ho ir, Odrdj o fidhkak'

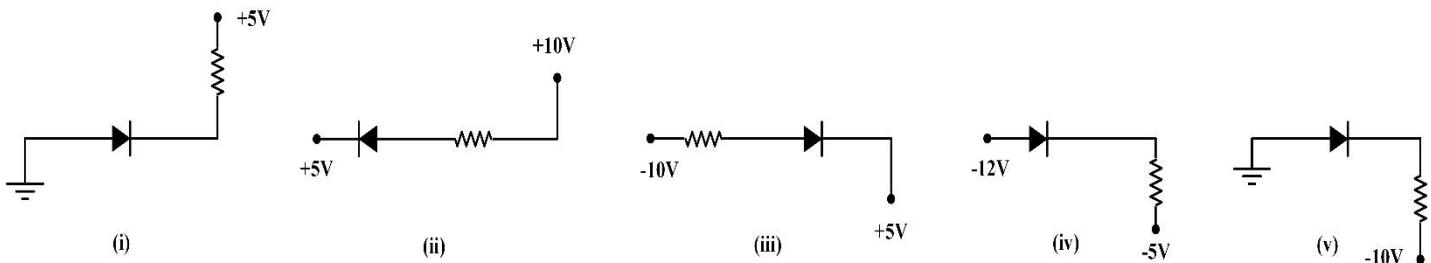


1.6 දෙපය

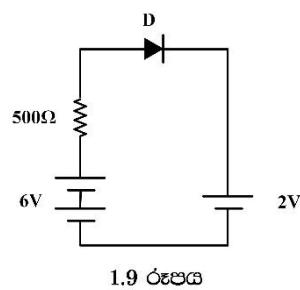


- i. iemhqfuka ,nd .kakd Odrdj (Is)"
  - ii. Ndrh yryd Odrdj (IL)"
  - iii. Èfhdavh yryd Odrdj (Iz)Iy
  - iv. osfhdavfha W;ai¾ckh jk laIu;dj fidhkak'

8.1'8 rEmfhys olajd we;s tla tla Èfhdavh mj;skafka miq keUqre wjia:dfõ o@

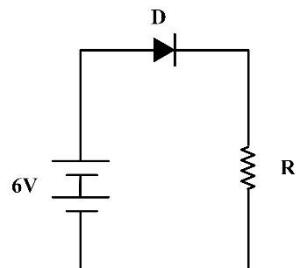


9.1'9 rEmfha fmkajd we;af;a Èfhda<sup>v</sup> mÙm:hls' Èfhda<sup>v</sup> mÙmQ¾K  
Èfhda<sup>v</sup>hla fia i,ld ta ;=<ska ,k Odrdj fidhkak'



10.1'10 rEmfha ±lafjk mßm:fhys Èfhdavh yryd .,k Wmßu Odrdj60mAg iSud  
I< hq;= ki" my; i`oyka tla tla wjia:dfõSRm%;sfrdaOh i`oyd ;sìh yels wju wh  
fidhkak'

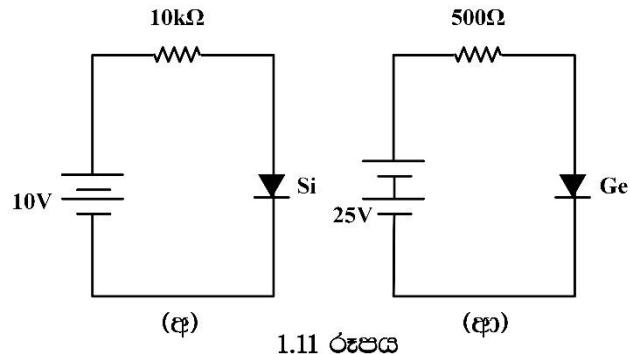
- i. "Èfhdavh mBmQ³K tlla ki"
  - ii. Èfhdavh yryd bÈB keUqre fjda,aàh;d neiau0.7V"ki"



11.1'11 ^w& rEmfhka is,slka Èfhdavhla fh¥  
mßm:hla o 1'11 ^wd& rEmfhka c¾fikshï  
Èfhdavhla fh¥ mßm:hla o ±la fõ'

- i. Èfhdav folu mßmQ¾K Èfhdav f,ii,ld  
^w& iy ^wd& mßm:j, m %;sfrdaOlh  
yryd .,k Odrdj fidhkak'

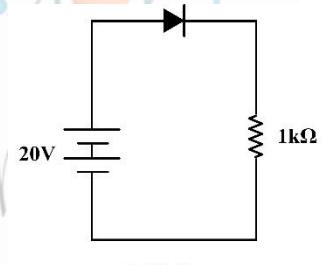
- ii. is,slka yd c¾fikshï Èfhdav" oKá  
fjda,aàh;d ms<sfj,ska0.7Vyd0.3Vjk  
m%dfhda.sl Èfhdav ki" ^w& iy ^wd& mßm:j, m%;sfrdaOlh yryd .,k Odrdj o Èfhdv aj,ska  
W;ai¾ckh jk laIu;dj o fidhkak'



1.11 දෙපය

12.1'12 rEmfha ±lafjk mßm:fphys Èfhdavh yryd bÈß keUqre úNj neiau  
0.7Vfõ'

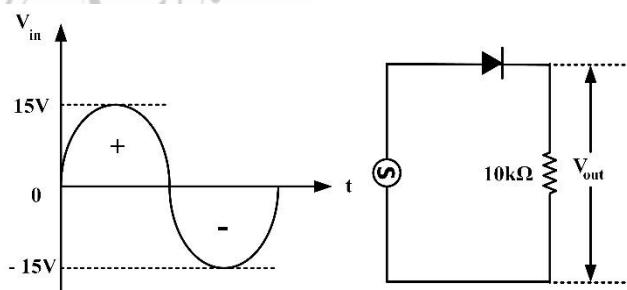
- i. Ndr m%;sfrdaOlh yryd Odrdj fjda,aàh;d neiau yd bka  
W;ai¾ckh jk laIu;dj  
ii. Èfhdavfhka W;ai¾ckh jk laIu;dj iy  
iii. Èfhdavfphys w.% udre l<fyd;a" ta yryd .,k Odrdj yd úNj  
wka;rh fidhkak'



1.12 දෙපය

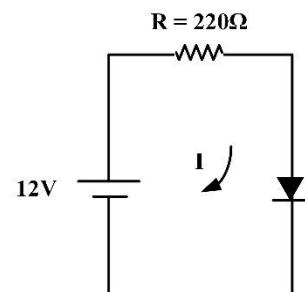
13. by; .eg,qfjys Èfhdavh mßmQ¾K Èfhdv a hla hehs i,ld Ndr m%;sfrdaOh yryd Odrdj fjda,aàh;d  
You are welcome;dj fidhkak'

14.1'13 rEmfha ±lafjk Èfhdavh mßmQ¾K Èfhdavhla f,ii,lkak' m%odk fjda,aàh;d ix{dfjys l=t  
wh15Vo" Ndr m%;sfrdaOlh 10kΩo fõ ki" Ok w¾O pl%pha § m%;sodk fjda,aàh;dfjys Wmßu  
wh o Èfhdavh yryd Wmßu Odrdj o" iDK w¾O pl%pha § Èfhdv ah ,la jk Wmßu miq fjda,aàh;dj  
oh my god



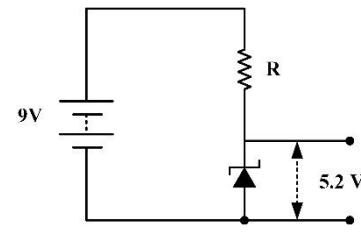
1.13 දෙපය

15.1'14 rEmfphys ±lafjk mßm:fphys Èfhdavh yryd .,k Odrdj52mAfõ'  
Èfhdavh yryd fh§ we;s úNj neiau o Èfhdavfphys iul ir, Odrd (dc)  
m%;sfrdaOh o fidhkak'



1.14 දෙපය

16.1'15 rEmfhys ±lafjkafka5.2Vksh; fjda,aàh;djla ,nd .ekSu i`oyd fhod.; yels fik¾ Èfhdavhla wvx.= mßm:hls' fik¾ Èfhdavfphys 5.2V, 400mWhkqfjka igyka ù we;' Èfhdavh yryd heúh yels Wmßu Odrdj oRm%;sfrdaOh i`oyd iqÿiq w.hla o fidhkak'

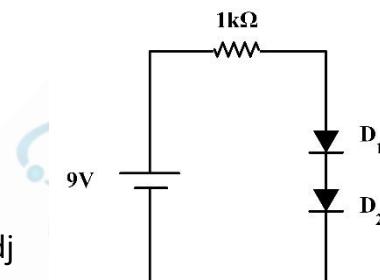


17.fmr keUqre is,slka Èfhdavhla yryd fjda,aàh;d neiau0.7Vo" fmr

keUqre c¾fikshii Èfhdavhla i`oyd th0.3Vo fõ' 1'16 rEmfhys

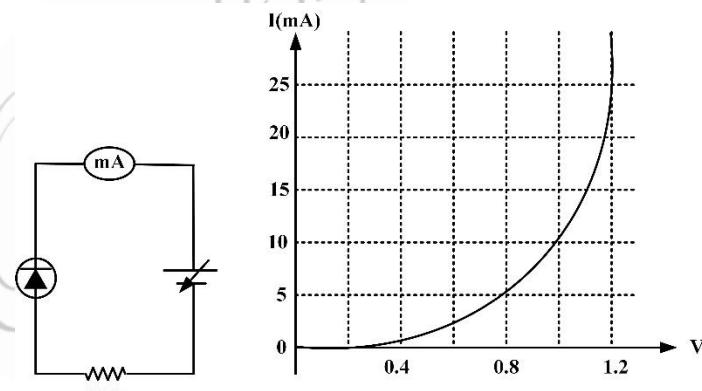
±lafjkafkaD1ydD2Èfhdav follska iukaú; mßm:hls'

- D1ydD2Èfhdav folu is,slka Èfhdav kii" mßm:fphys .,k Odrdj fidhkak'D2ys ÈYdj udre l<fyd;a mßm:fphys .,k Odrddj I=ula o@
- D1is,slka Èfhdavhla oD2c¾fikshii Èfhdavhla o fõ kii" mßm:fphys .,k Odrdj fidhkak' ±kaD2ys ÈYdj udre l<fyd;a mßm:fphys .,k Odrdj fidhkak'



18.1'17 w& rEmfhys ±lafjk mßm:fphys is,slka Èfhdv a h" úp,H" wvq fjda,aàh;d" ir, Odrd iemhqula" ñ,s weógrhla yd50kΩm%;sfrdaOlhla iù. fYa%Ks.;j iinkaO Ir we;' fuu Èfhdavh i`oyd I – V , dlaIKsl jl%h 1'17 ^wd& rEmfhys ±lafõ'

- ñ,sweógrh yryd Odrdj5mAjk úg" ir, Odrd iemhqfuka ,efnk fjda,aàh;dj fidhkak'

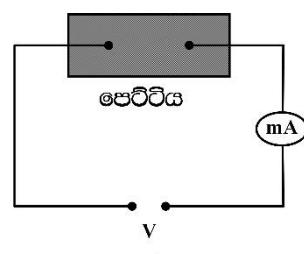


(a)

1.17 දෙපය

(b)

19.1'18 rEmfha olajd we;s fmÜáh ;=< w¾O ikakdhli Èfhdavhla yd ksh; m%;sfrdaOlhla hï wdldrhlg iinkaO fldg" w.% folia muKla msg;g newD; fldg we;' fuu w.% fol iù. fYa%Ks.;j ñ,s weógrhla (mA)yd fjda,aàh;dm%Njhla iinkaO fldg we;' m%Njfphys fjda,aàh;dj1.0Vjk úg" ñ,s weógrfphys lsheùu25mAfõ' tu fjda,aàh;dju ÈYdj udre fldg fh¥ úg" ñ,s weógrfphys lsheùu50mAfõ' fmÜáh ;=< Èfhdavh yd



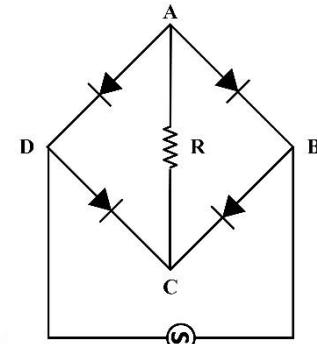
m%;sfrdaOlh iïnkaOfldg we;af;a ljr wdldrhlg ±hs fya;= iys;j olajkak' Èfhdv a fhys fmr keUqre m%;sfrdaOh o" m%;sfrdaOlphys wh o .Kkh lrkak'

20.1'19 rEmfhys ±lafjk mßÈ – I am a good person.

m%;sfrdaOlhla wvx.= fia;= mßm:fphys yd ikaê yryd m%;Hdj¾; fjda,aàh;d iemhqula iïnkaO lr we;' iemhqï fjda,aàh;dfjys pl% follg wkqrEm jk ld,h we;=<" ld,h;a iù.

- g idfmalaIj "ys úNjh"
- g idfmalaIj ys úNjh iy
- g idfmalaIj "ys úNjh"

úp,kh jk wdldrh o< igyklska fmkajkak'

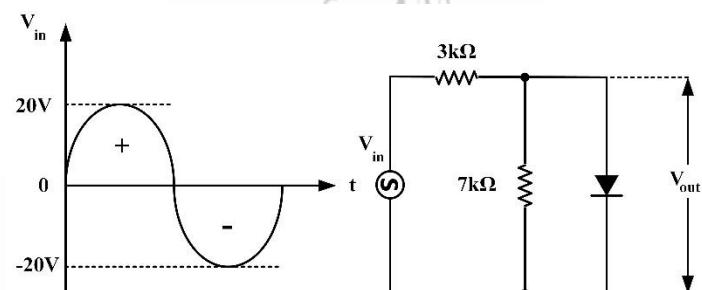


1.19 දෙපය

21.1'20 rEmfha ±lafjkafka mßmQ¾K

Èfhdavhla wvx.= mßm:hls' m%odk fjda,aàh;d ;rx.fphys lt fjda,aàh;dj 20 "ki"

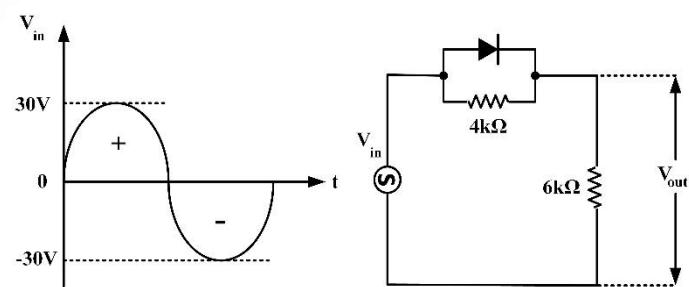
- Èfhdavh yryd Wmßu Odrdj
- Wmßu miq fjda,aàh;dj
- m%odk ;rx.fphys Ok w¾O pl%phys § m%;sodk fjda,aàh;dfõ Wmßu wh yd
- m%odk ;rx.fphys iDK w¾O-pl%phys § m%;sodk fjda,aàh;dfjys iDK Wmßu wh fidhkak'



1.20 දෙපය

22.1'21 rEmfha ±lafjk mßm:fphys Èfhdavh mßmQ¾K tlla nj i,ld

- Èfhdavh yryd Wmßu Odrdj iy
- m%;sodk fjda,aàh;dfjys Ok yd iDK l=t w.hhka fidhkak'

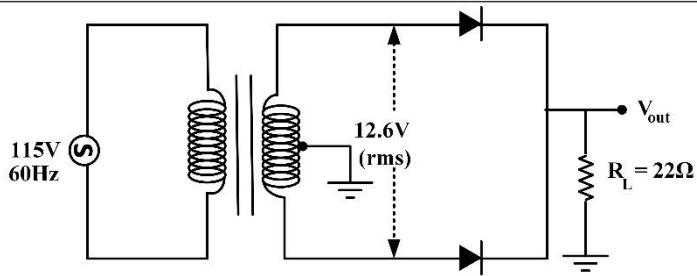


1.21 දෙපය

23.1'22 rEmfhys ±lafjkafka Èfhdv a folksa yd ueo iejqkq wjlr mßKdulhlska iukaú; jQ

iDcqldrl mßm:hls'

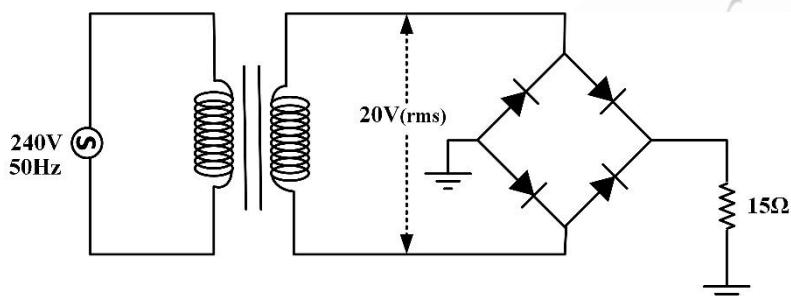
- Ndrh yryd ir, Odrd fjda,aàh;dj"
- Èfhdavh yryd Wmßu miq fjda,aàh;dj yd
- Èfhdavh yryd ir, Odrdj fidhkak'



1.22 උෂපය

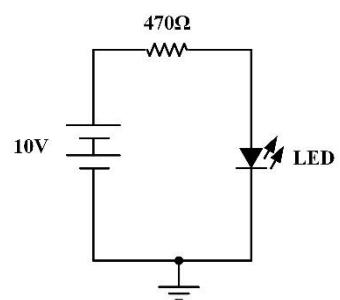
24.1'23 rEmfhka ±lafjkafka Èfhdav y;rlska iEÿ mQ¾K ;rx. iDcqldrl mßm:hls'

- Ndrh yryd ir, Odrd (dc)fjda,aàh;dj"
- tla tla Èfhdavh yryd fhfok Wmßu miq fjda,aàh;dj iy
- Èfhdav yryd .,k ir, Odrdj fidhkak'



1.23 උෂපය

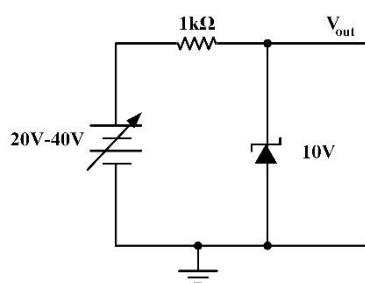
25.1'24 rEmfha ±lafjk wdf,dal úfudapl Èfhdavh ( )yryd Odrdj  
fidhkak' Èfhdavh yryd úNj neiau2.0 f,i .kak'



1.24 උෂපය

26.1'25 rEmfha ±lafjk mßm:fphys"

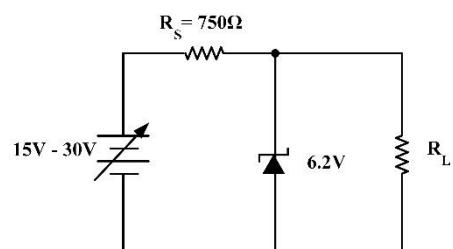
- m%;sodk fjda,aàh;dj o
- I am a fan of Odrdj.
- Wmßu fik¾ Odrdj fidhkak'



1.25 උෂපය

27.1'26 rEmfhys ±lafjk mßm:fphys Ndr m%;sfrdaOfphys ( )

- wh820Ωfõ'
- fYa%Ks.; m%;sfrdaOh yryd wju Odrdj"
  - Ndr m%;sfrdaOh yryd Odrdj"
  - fik¾ Èfhdavh yryd wju Odrdj"

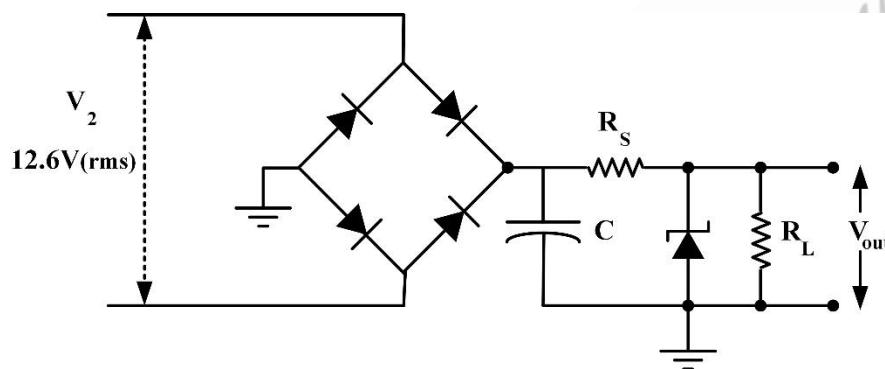


1.26 උෂපය

iv. fik $\frac{3}{4}$  Èfhavh yryd Wmßu Odrdj fidhkak'

28.1'27 rEmfha ±lafjk fia;= iDcqldrl mßm:fphys mQ $\frac{3}{4}$ K f,i iDcqlrKh jQ m%;sodk fjda,aàh;dj iqugkh lsíu i`oyd Odß;%lhla om%;sodk fjd, a aàh;dj hdukh lsíu i`oyd Odß;%lhla o m%;sodk fjda,aàh;dj hdukh lsíu i`oyd fik $\frac{3}{4}$  Èfhavh a hla o we;=<a fldg we;' wjlr mßKdulhka ,efnk oaú;Shsl fjda,aàh;dj  $= 12.6 \text{ V}_{\text{rms}}$  fô' fik $\frac{3}{4}$  fjda,aàh;dj  $6.8 \text{ ohms} = 1 \Omega$  "Oh my god"

- i. oaú;Shsl fjda,aàh;dfjys l='t wh"
- ii. Odß;%lh yryd ^iqugkh jQ& ir, Odrd ( )fjda,aàh;dfjys wdikak wh"
- iii. m%;sfrdaOlh yryd Wmßu Odrdj"
- iv. Ndr m%;sfrdaOlh yryd Odrdj iy
- v. Wmßu fik $\frac{3}{4}$  Odrdj fidhkak'

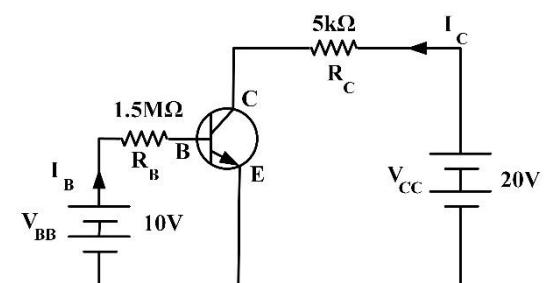


1.27 දෙපය

## 2' g%dkaisiagrh wdYs%; .eg,Q

fuu .eg,qj, g%dkaisiagrh is,slka j $\frac{3}{4}$ .fha kï" mdou-úfudapl úNj wka;rh ( ) 0.7 f,io c $\frac{3}{4}$ fikshï j $\frac{3}{4}$ .fha kï ys wh0.3 f,i o" j $\frac{3}{4}$ .hi`oyka lr fkdue;s wjia:dj, § = 0 f,ioi,ld we;"

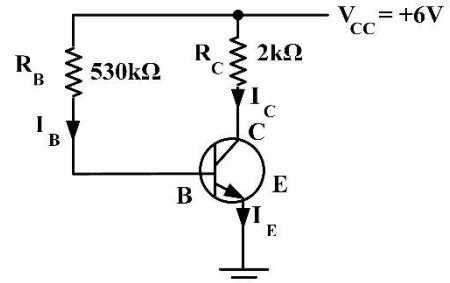
1.2'1 rEmfha ±lafjkafka is,slka g%dkaisiagrhlawa wvx.= mßm:hls' g%dkaisiagrflhs ir, Odrd ,dNh" ( ) 125la fô' ix.%dylh iy úfudaplh w;r ir, Odrd ( ) fjda,aàh;dj ( ) fidhkak' g%dkaisiagrflhs laIu;d W;ai $\frac{3}{4}$ ckh fldmuK o@



2.1 දෙපය

2.2'2 rEmfha ±lafjkafka" fmdÿ úfudapl úkHdifhys mj;akd mßÈ"  
mdou m%;sfrdaOlhla ù.ska keUqre fldg we;s is,slka  
g%dkaisiagrhl's tys ir, Odrd ,dNh 100 la fô' = 0.7  
f,i fk my; iøyka rdYSka .Kkh Irkak'

- Odrdj yd "Odrdj"
- m%;sfrdaOh yryd fjda,aàh;d neiau iy
- yd w;r fjda,aàh;dj



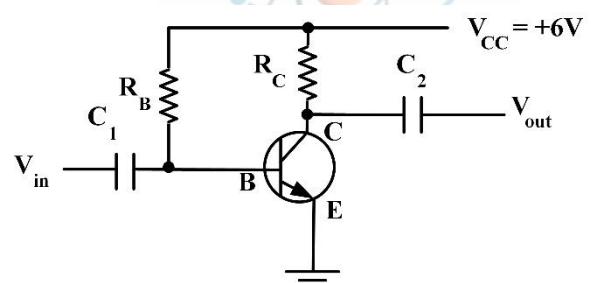
2.2 දෙපය

fuu g%dkaisiagrhh mj;skafka" lmdyeÍ" f¾Ch yd ix;Dma; hk wjia:dw;=frka ljr wjia:djl o@

3.2'3 rEmfhys ±lafjkafka is,slka

g%dkaisiagrhl'a wvx.= fmdÿ úfudapl j¾OI  
mßm:hls' tys = 0.7 fô'

- ix{dm%odkhla fkdue;s úg" mdou Odrdj 20  
You are welcome. ys wh l=ula úh hq;=o@
- ir, Odrd ,dNh 500 k" by; wjia:djg  
wkqrEm jk ix.%dyl Odrdj fidhkak'
- = 2 You are welcome. ys wh l=ula úh hq;=o@
- 1yd 2Odß;%lj,ska isýjk ld¾hh l=ula o@

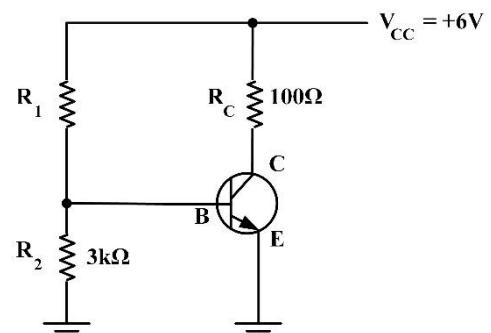


2.3 දෙපය

4.2'4 rEmfhys ±lafjkafka fmdÿ úfudapl úkHdifhys keUqre  
lr w;s is,slka g%dkaisiagrhl's thg mdou keUqre

fjda,aàh;dj imhd we;af;a 1yd 2m%;sfrdaOl fh¥  
fjda,aàh;d Ndcl ieliqula ù.sks'

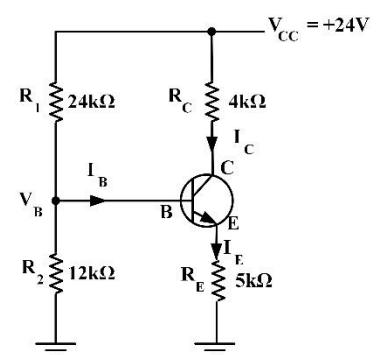
- g%dkaisiagrhh f¾Ch wjia:dfõ mj;ajd .ekSu i`oyd 1  
m%;sfrdaOlhys wh l=ula úh hq;= o@ = 0.7  
f,ii,lkak'
- ika; Dma; wjia:dfjys mj;akd úg" m%;sfrdaOlh yryd úNj wka;rh o ta ;=<ska .,k  
Odrdj o fidhkak'



2.4 දෙපය

5.2'5 rEmfhys ±lafjk is,slka g%dkaisiagrphys mdou" úNj fnÿi l%uh ( )fhodod keUqre fldg we;"

- ix.%dyl fjda,aàh;dj ( )o" ix.%dyl - úfudapl w.% w;r fjda,aàh;dj  
( )oh my god
- fuu mßm:hi`oyd ir, Odrd Ndr f¾Ldj ( )wè o ta u; ,  
w.hkag wkqrEm jk ksjd; ( ),laIHh ,l=Kq Irkak'

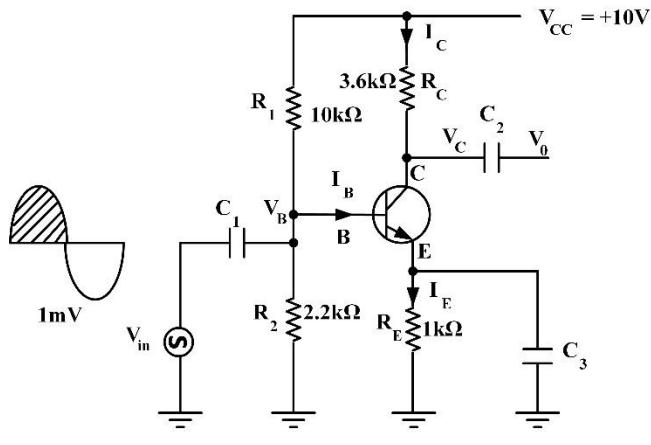


2.5 දෙපය

6.2'6 rEmfhs ±lafjkafka ir, Odrd ,dNh = 200jQ is,slka g%dkaisiagrhl wvx.= fmdy úfudapl

j34OI mßm:hls' l=t wh1 jk m%odk ix{d fjda,aàh;djla" 1Odß;%lh yryd mdou w.%hg fhodw  
we;' m%;Hdj34;l fjda,aàh;d ,dNh 150la fõ' , , , , , yd m%;sodk

ix{dfjys l=t wh ( )o fidhkak' m%odk yd m%;sodk fjda,aàh;d ld,h iù. fjkiajk wkaou ±lafjk  
lgq igyka fokak'

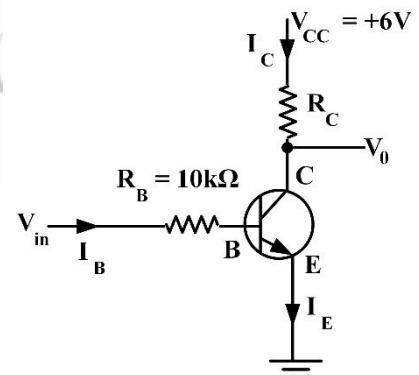


2.6 දෙපය

7.2'7 rEmfha ±lafjk mßm:fhs is,slka g%dkaisiagrphys ir,

Odrd ,dNh 100la fõ' g%dkaisiagrhy ika;Dma; wjia;dfõ  
mj;skafka ki" m%odk fjda,aàh;dj2.2 jk úg" my; ±lafjk  
rdYSka .Kkh lrkak' = 0.7 f,i .kak'

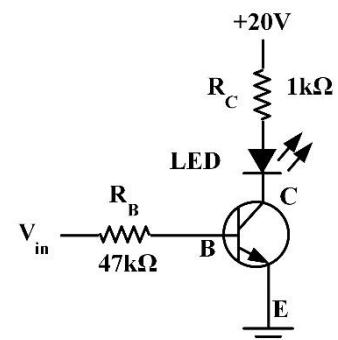
- mdou Odrdj
- ix.%dyl Odrdj
- úfudapl Odrdj
- ix.%dyl m%;sfrdaOh Iy
- m%;sodk fjda,aàh;dj o



2.7 දෙපය

8.2'8 rEmfhs ±lafjkafka is,slka g%dkaisiagrhl fh¥ iaúÉÑ

mßm:hls' wdf,dal úfudpl Èfhdavh ( )I am a woman.2 "o"  
g%dkaisiagrphys ir, Odrd ,dNh = 150o fõ' g%dkaisiagrhy  
ika;Dma; wjia;dfõ mj;akd úg" ( )Èfhdavh yryd Odrdj o fu úg  
Odrdj yd m%odk fjda,aàh;dj ( )oh my god

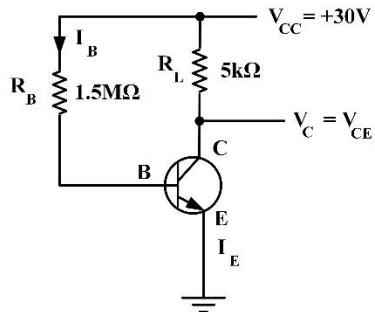


2.8 දෙපය

9.2'9 rEmfha ±lafjkafka fmdy úfudapl g%dkaisiagr mßm:hls'

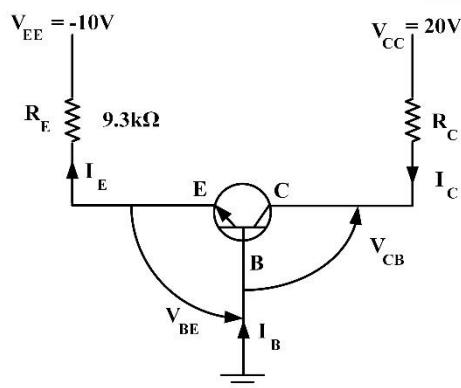
- g%dkaisiagrhy i'oyd ;sìh yels Wmßu ix.%dyl Odrdj ( )^tki = 0jk úg What is it?

- ii. g%dkaisiagrhi`oyd ;sih yels Wmßu ys wh ^tki = 0jk úg  
What is it?
- iii. fuu,laIH fol - wlaI u; ,l=Kq fldg hd lsífuka Ndr  
f¾Ldj ,nd .kak'
- iv. = 100f,io = 0f,io fk § we;s mßm:hi`oyd  
, yd fidhkak' fuu yd w.hkag wkqrEm jk ksjd; ,laIHh  
Ndr f¾Ldj u; ,l=Kq lrkak'



2.9 තුළය

10.2'10 rEmfha ±lafjkafka fmdy mdou úkHdifha ;sfnk is,slka g%dkaisiagrhl = 0.7  
f,i fk" , "w.hka o" = 5 You are welcome. g ;sih hq;= wh o fidhkak'



2.10 තුළය

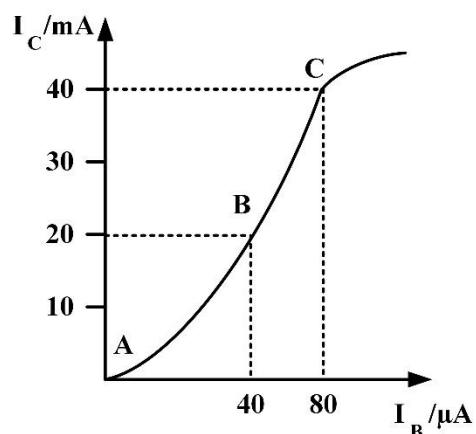
11.fmdy úfudapl úkHdifphys ;sfnk fia keUqre fldg we;sg%dkaisiagrhl ir, Odrd ,dNh 200 ls' tys  
mdou Odrdj40 "ki"

- i. ix.%dyl Odrdj yd  
ii. úfudapl Odrdj fidhkak'

12.fmdy úfudapl úkHdifha ;sfnk mßÈ keUqre

Irk ,og%dkaisiagrhl i`oyd ,nd.;a ixl%duKsl ^ - w;r&  
pl%hla 2'11 rEmfhka ±lafõ'

- i. ika; Dma; wjia:dj ±lafjkafka ljr ,laIHhlska o@ fuu  
wjia:dj ,nd .ekSu i`oyd wjYH jk wju mdou Odrdj  
fldmuK o@ túg" ix.%dyl Odrdj fldmuKo@  
ii. lmd yeßh wjia:dj ±lafjkafka ljr ,laIHhlska o@ túg  
mdou Odrdj yd ix.%dyl Odrdj ^wdikak jYfhka&  
fldmuKo@  
iii. g%dkaisiagrh tys ilS%h fldgfiys mj;akd úg" ir,  
Odrd ,dNh l=ula fõo@

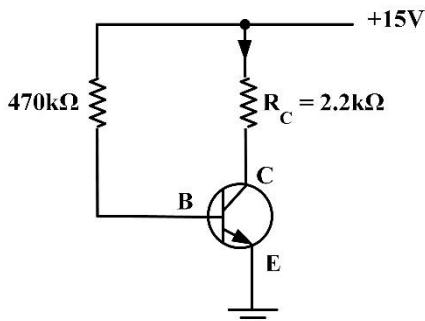


2.11 තුළය

- iv.  $I_{vd} = 100 \mu A$  úlD;shlska f;drj j3/4Okh lr .ekSu i`oyd iqyiq jkafka jl%hu; jQ , yd ,laIHj,ska ljr ,laIHhla o@ tág" mdou Odrdj yd ix.%dyl Odrdj fldmuKo@
- v. fuu g%dkaisiagr" iaúÉNhla f,i Ndú; lsÍfi § tys újD; yd ixjD; mej;=i wjia:d ms<sfj,ska wkqrEm jkafka jl%hu; ljr ,laIHj,go@

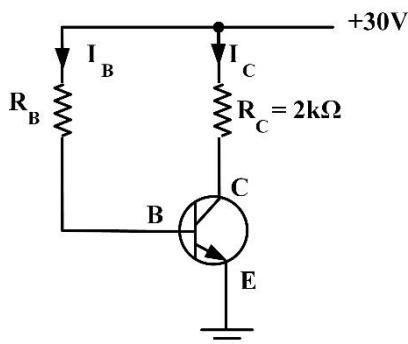
13.2'12 rEmfhys ±lafjk mßm:fphys ^is,slka &g%dkaisiagr h iòyd ir, Odrd ,dNh

- i.  $I_B = 100 \mu A$
- ii.  $I_C = 300 \mu A$  ix.%dyl Odrdj ( )fidhkak'



2.12 උපය

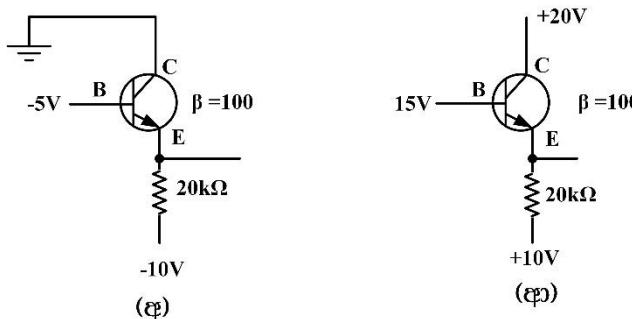
14.2'13 rEmfha ±lafjk mßm:fphys wvx.= is,slka g%dkaisiagr hys ir, Odrd ,dNh = 100 fô' mdou m%;sfrdaOfhys wh = 400 Ω"jk úg" Iy What is the meaning of the word 'fidhkak'?



2.13 උපය

15.2'14 w& rEmfha ±lafjk fmdý ix.%dyl g%dkaisiagr mßm:fphys , , Iy fidhkak' fkdi,ld yßkak' = 100f,i .kak'

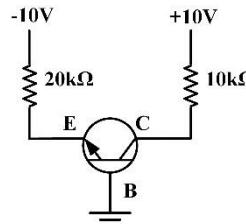
2'14 wd& rEmfha ±lafjk fmdý ix.%dyl g%dkaisiagr mßm:hí'oyd , , Iy fidhkak' fkdi,ld yßkak' = 100f,i .kak'



2.14 උපය

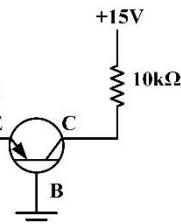
16.

- i. 2'15 ^w& rEmfha ±lafjk fmdÿ mdou  
g%dkaisiagr mßm:fphys fidhkak'  
ikaê fjda,aàh;dj fkdi,ld yßkak'
- ii. 2'15 ^wd& rEmfha ±lafjk fmdÿ mdou  
g%dkaisagrphys = 10 ùu i`oyd ;sìh hq;= What is the  
meaning of 'ys wh fidhkak'? fkdi,ld yßkak'



(ep)

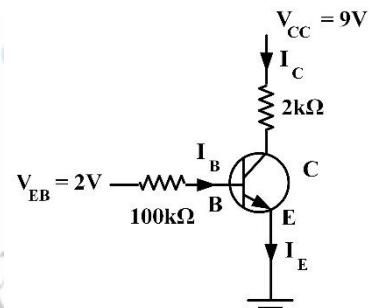
2.15 දෙපය



(ep)

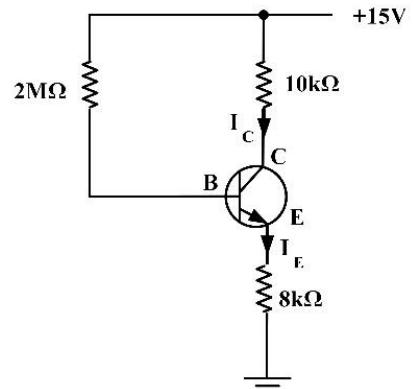
17.2'16 rEmfphys ±lafjkafka ,dou m%;sfrdaOlhla û.ska keUqre fldg

we;s" = 50jk g%dkaisiagrhl's' mdou - úfudapl fjda,aàh;dj ( )  
Y=kH f,i fk yd fidhkak'



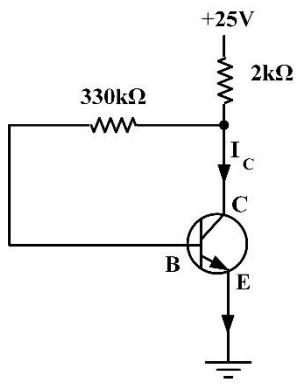
2.16 දෙපය

18.2'17 rEmfphys ±lafjk ìs,slka &g%dkaisiagr mßm:hi`oyd ,  
Iy fidhkak' g%dkaisiagrphys ir, Odrd ,dNh" = 100f,i .kak'



2.17 දෙපය

19.2'18 rEmfphys ±lafjk i, with a smile &g%dkaisiagr mßm:hi`oyd = 150  
la fô' Iy fidhkak'

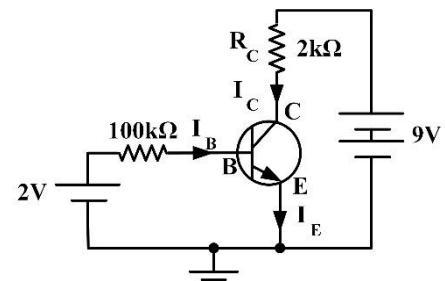


2.18 දෙපය

20.2'19 rEmfhys ±lafjkafka ir, Odrd ,dNh = 50jk

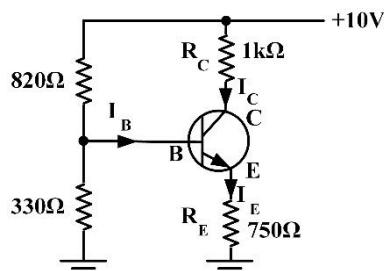
g%dkaisiagrhl wvx.= mßm:hls' th mdou m%;sfrdaOlhla  
fhod keUqre fldg we;' mdou-úfudapl fjda,aàh;dj ( )  
"fkdi,ld yer"

- mdou Odrdj ( )o" ix.%dyl Odrdj ( )o" ix.%dyl-  
úfudapl fjda,aàh;dj ( )oh my god
- ys wh50 Ω"l<fyd;a" , yd ,nd .kakd w,q;a w.hhka fidhkak'



2.19 දෙපය

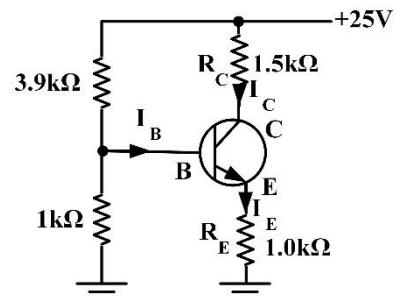
21.2'20 rEmfhys ±lafjkafka úNj fnÿi l%uhg keUqre Ir we;s is,slka g%dkaisiagr mßm:hls' fuu  
mßm:h iòyd ix.%dyl Odrdj" iy ix.%dyl fjda,aàh;dj" fidhkak'



2.20 දෙපය

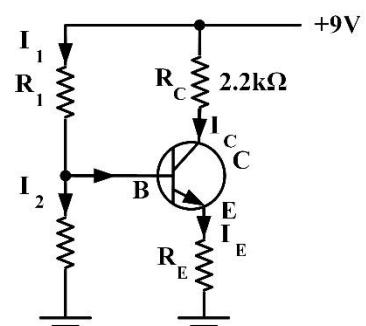
22.2'21 rEmfha ±lafjkafka is,slka g%dkaisiagrhl wvx.=  
mßm:hls' fuu mßm:fphys

- yd ,laIHj, fjda,aàh;do
- úfudapl Odrdj ( )"o"
- ,laIHfphys fjda,aàh;dj o fidhkak'



2.21 දෙපය

23.2'22 rEmfhys ±lafjkafka úNj fnÿi m%;sfrdaO ieliqulska mdou  
keUqre fldg we;s c¾fikshii g%dkaisiagrhl = 9 "o" =  $2.2\Omega$   
"o" =  $500$  fõ' g%dkaisiagr =  $2$   $I_y = 3$  ;ajfhys mj;ajd .ekSu  
i`oyd 1, 2yd m%;sfrdaOj,g ;sìh hq;= w.hhka ks¾Kh lrkak' =  
0.3 "nj o" 1=  $10$  nj o § we;'



2.22 දෙපය

24.2'23 rEmfhys ±lafjkafka =  $660 = 0.3 \text{ o jk c}^{\frac{3}{4}}\text{fikshii}$

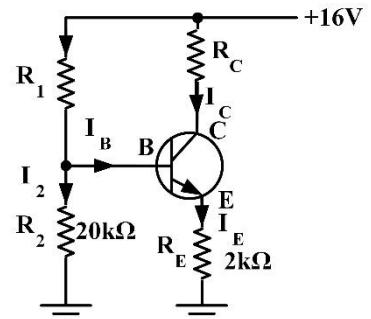
g%dkaisiagrhlawa wvx.= mßm:hls' tys mdou" fjda,aàh;d fnÿula

ù.ska keUqre fldg we;' =  $16 \text{ k}^{\frac{3}{4}}$  fuu mßm:h =  $2 \text{ Iy} =$

6 jk wjia:dfjys mj;ajd .ekSu i`oyd 1yd m%;f

;sìh hq;= w.hka fidhkak'

s rdaOl i`oyd



2.23 දෙපය

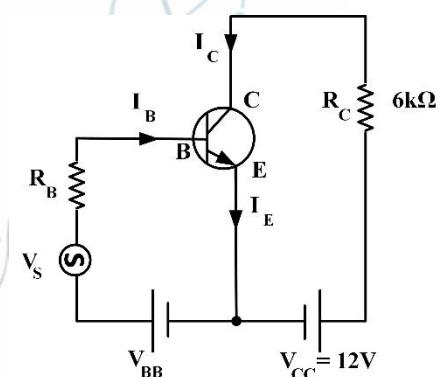
25.2'24 rEmfhys ±lafjkafka ir, Odrd ,dNh =  $50\text{jk}$

g%dkaisiagrhlawa wvx.= mßm:hls'

i. m%odk ix{dj ( )Y=kHh jk wjia:dfõ § mdou Odrdj

=  $20 \text{ f}^{\frac{3}{4}}$  fuúg ix.%dyl Odrdj ( )o" ix.%dyl úfudapl  
fjda,aàh;dj ( )oh my god

ii. fuu mßm:fphys g yd g ;sìh yels Wmßu w.hka ljf%o@

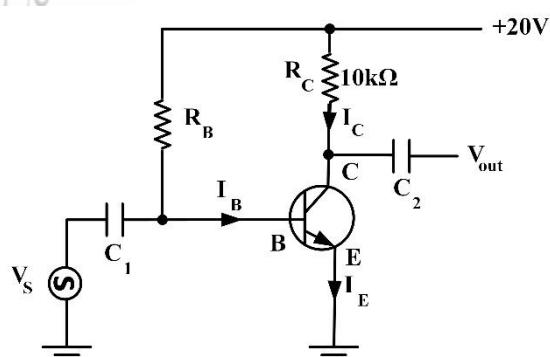


2.24 දෙපය

26.2'25 rEmfha ±lafjkafka =  $50\text{jk}$  is,slka g%dkaisiagrhlawa fhodod ie,iqī l< fmdy úfudapl j%OI

mßm:hls' =  $0.7 \text{ f},i fk = 1$  ùu i`oyd ;sìh hq;= What is the meaning of the word 'fidhkak'?

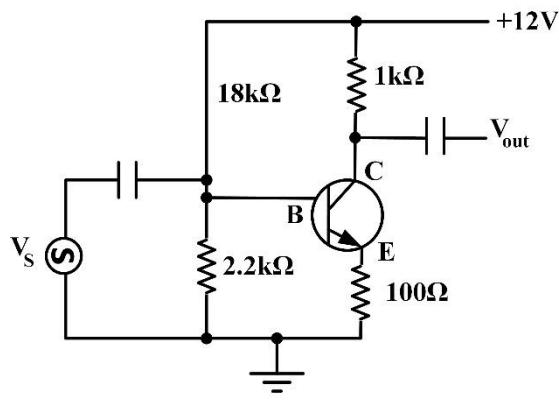
ys wh l=ulao@



2.25 දෙපය

27.2'26 rEmfhys ±lafjkafka  $I = V_d / (2.2k\Omega + 18k\Omega)$  is, slka g%dkaisiagr fmdy

úfudapl j%OI mßm:hls' fuu mßm:h iòyd , , , Iy w.hhka fidhkak'



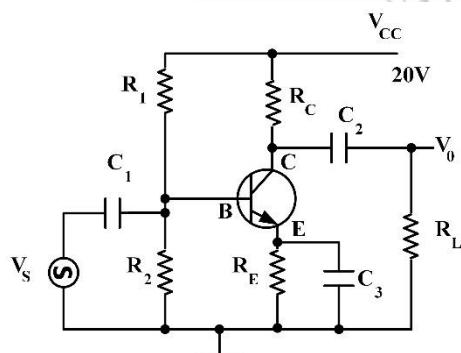
2.26 දෙපය



28.is,slka g%dkaisiagr hlska ( $\beta = 0.7$ ) iEjy fmdy úfudapl j%OI mßm:hla 2'27 rEmfhys ±lafõ'

m%;sfrdaOlj, w.hhka  $i_1 = 1 \Omega$ ,  $i_2 = 5 \Omega$ ,  $i_3 = 1 \Omega$ ,  $i_4 = 2 \Omega$ ;  $I_y = 1 \Omega$  fõ'

- yd iòyd ;sìh yels Wmßu w.hhka fidhd tajd weiqßka ir, Odrd Ndr f%4Ldj w`Èkak'
- , , yd w.hhka fidhd" Ndr f%4Ldj u; , laIHh , l=Kq Irkak'

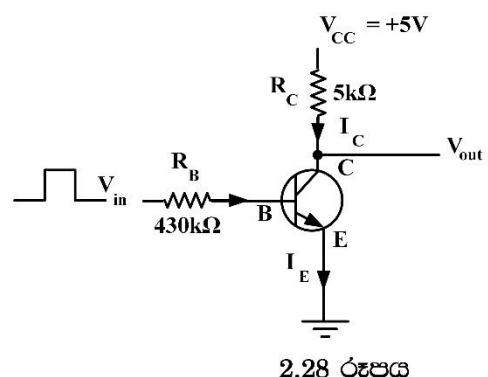


2.27 දෙපය

29.2'28 rEmfhys ±lafjkafka  $= 100jk$  is,slka

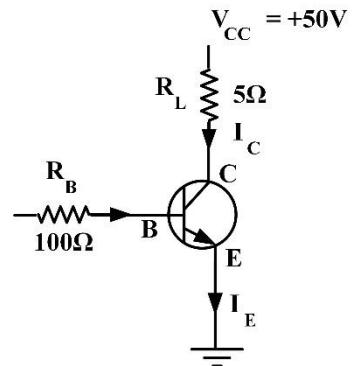
g%dkaisiagr hlska iEjy iaúÉÑ mßm:hls' m%odk fjda,aàh;dj ( ), 5 yd0 w;r úp,kh jk fldgq ;rx.hls'  
( )'

- $= 5 jk$  úg îka;Dma; wjia:dj&
- $= 0jk$  úg ^lmdyeÍ wjia:dj& , yd I`oyd w.hhka fidhkak'



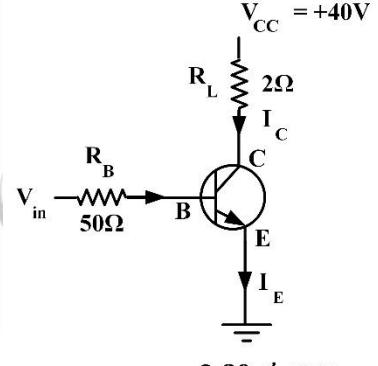
2.28 දෙපය

30.2'29 rEmfhys ±lafjk iaúÉÑ mßm:fhys g%dkaisiagr h ika;Dma;  
 wjia:dfō we;s úg" ys wh1.2 o ys wh1 o fō' fuu wjia:dfō § Ndr  
 m%;sfrdaOh yryd Odrdj fidhkak' = 90ki" ika;Dma; wjia:dj we;s  
 lsíu i`oyd wjYH jk ys wju wh o ta i`oyd fhÈh hq;= m%odk  
 fjd,aàh;dj oh my god



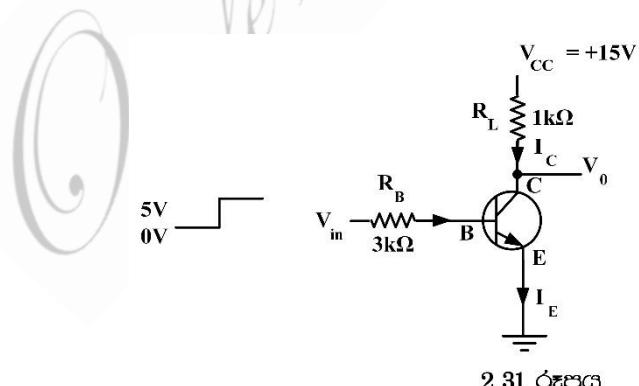
2.29 උපය

31.2'30 rEmfhys ±lafjk gd% kaisiagr h i`oyd = 1.1fō' = 80 ki"  
 g%dkaisiagr h tys ika;Dma; wjia:djg m;a lsíu i`oyd fhÈh hq;=  
 wju m%odk fida,aàh;dj l=ulao@ fkdi,ld yßkak'



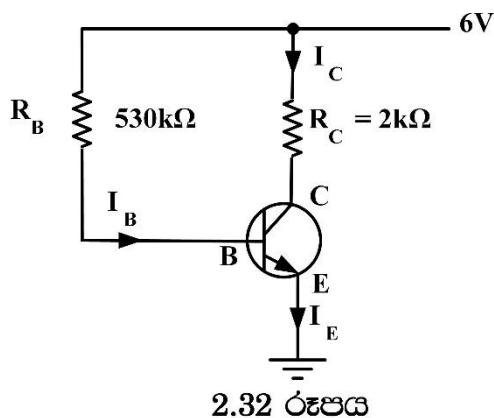
2.30 උපය

32.0 isg +5 olajd jeä jk fida,aàh;d mshjrla 2'31 rEmfhys ±lafjk is,slka g%dkaisiagr fhys mdou  
 w.%h fj;3 Ωm%;sfrdaOlhla yryd m%odkh flf¾' m%;sodk fida,aàh;dfjys ( o)wdldr h yd  
 úYd;;ajh o" = 5 jk úg What is it? ys ika;Dma; wh o fidhkak'



2.31 උපය

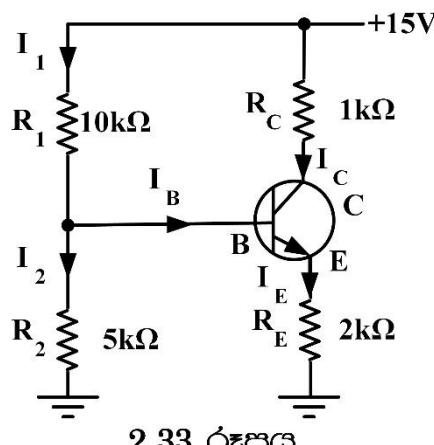
33.2'32 rEmfhys ±lafjk is,slka g%dkaisiagr h (= 100)wvx.= mßm:hi`oyd , yd  
 fidhkak' = 0.7 f,i .kak' fuu mßm:hi`oyd = 0jk úg "What is it?" = 0 jk úg ys wh o fidhd  
 tu.ska ir, Odrd Ndr f¾Ldj ( )wè o ta u; by;ska , nd.;a yd w.hkag wkqrEm jk ^  
 ksjd;& ,laIHh ,l=Kq lrkak'



34.2'33 rEmfha ±lafjkafka is, slka g%dkaisiagrhl ( = 0.7 )wvx.= fmdj úfudapl mßm:hls' th" fjda,aàh;d fnÿula ù.ska keUqre fldg we;"

i. = 0jk úg "What is it?" = 0jk úg ys wh o fidhd tu.ska ir, Odrd Ndr f¾Ldj w`Èkak'

ii. , , yd w.hka fidhd Ndr f¾Ldj u; ,laIHh ,l=Kq lrkak'

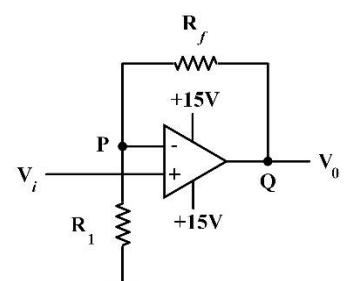


### 3' ldrld;aul j¾Olh wdYs%; .eg,q

1.3'1 rEmfphys ±lafjkafka ldrld;aul j¾Olhla fhdod ieliQ wmq¾;k fkdkjk

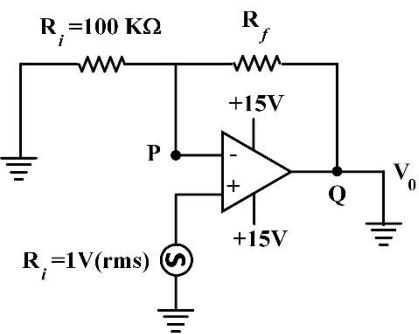
j¾Ol mßm:hls' th = ±15 iemhqulg iiinkaO lr we;' ixjD; mqvq

fjda,aàh;d ,dNh 30la fyda Bg wdikak u w.hla& ùu i`oyd" Tn úiska 1  
yd i`oyd f;dard .kafka fuu m%;sfrdaO w;=frka ljr tajd o@



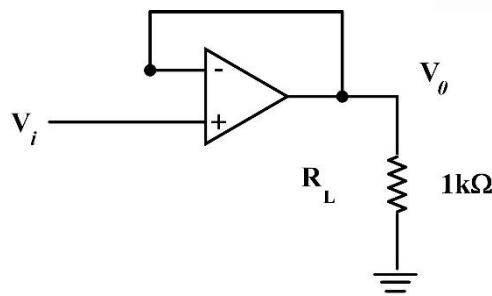
2.3'2 rEmfhys ±lafjkafka" wMJ¾;k fkdkj ldrld;aul j¾O  
mßm:hls' tys 1= 100 1Ωfõ'

- ixjD; mqvq ,dNh 2'5 ùu i`oyd m%;sfrdaOhlg ;sìh hq;= wh fidhkak'
- wvq ixLHd;hlska hq;a1 ( )ix{djla wMJ¾; fkdkj w.%h fj;g fhodod we;aki" m%;sodk fjda,aàh;dj" o( ) fidhkak' ix{dm%Njfphys m%;sfrdaOh ^iiindOkh& fkdi,ld yßkak'



3.2 දෙපය

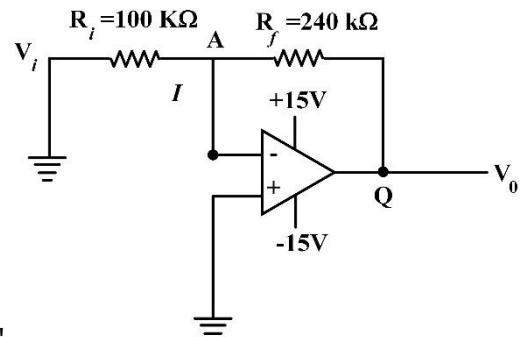
3.3'3 rEmfha ±lafjk mßm:h iòyd = 2 "jk úg" = 1 ΩNdrh yryd Odrdj fidhkak'



3.3 දෙපය

4.3'4 rEmfhys ±lafjkafka wMJ¾;k j¾Ol mßm:hls' 1= 10 Ω"o" = 240 Ωo fõ' fuu mßm:hi`oyd my; iòyka rdYSka fidhkak'

- ixjD; mqvq ,dNh
- m%odk m%;sfrdaOh
- = 50 "ki" oys wh
- 1fkdfjkiaj ;nd .ksñka" fjda,aàh;d j¾Okhlska f;drj" fjda,aàh;d wMJ¾;lhlala f,i muKla Ndú;hg .ekSu iòyd g ;sìh hq;= wh"
- m%;sfrdaOh bj;a lr oys wh ika;Dma; jk f;la "jeä l<fyd;a" ys Wmßu wh 100 fõ' oika; Dma; jk wjia:dfõ § tys wh" o( )≈ ±13 f,i fk" ldrld;aul j¾Olhys újD; mqvq ,dNh fidhkak'



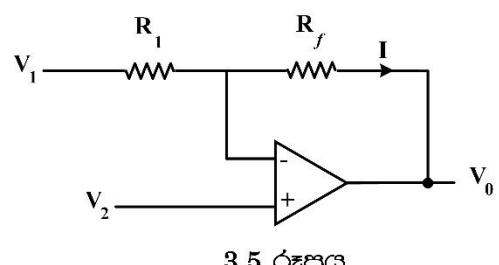
3.4 දෙපය

5.3'5 rEmfha ±lafjkafka ldrld;aul j¾Olhla fhodod ieliQwdka;rj¾Ol(

)mßm:hls' ≈ 1"ki" 0=( 2-

nj fmkajkak'

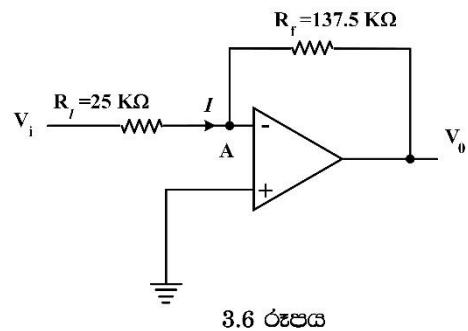
$\frac{1}{2}$



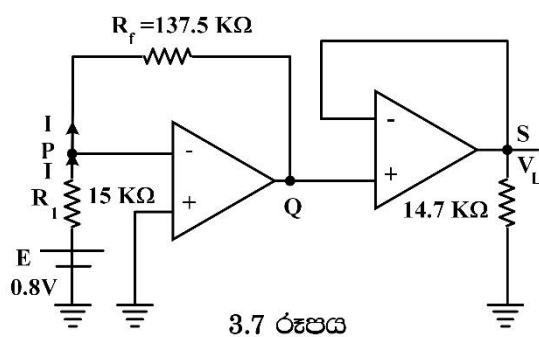
3.5 දෙපය

6.3'6 rEmfhys ±lafjkafka ldrld;aul j¾Ol mßm:hls'

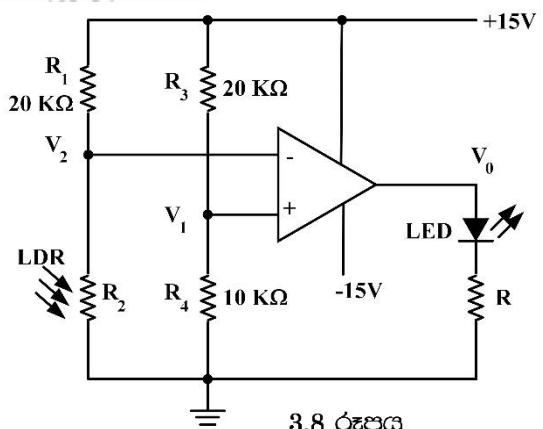
- = 1.5 jk úg ofidhkak'
- = 1.5 "jk úg" 25 Ωm%;sfrdaOlh ryd Odrdj fidhkak'
- = 0.6 "jk úg" ofidhkak'



7.3'7 rEmfhys ±lafjkafka mßmQ¾K ldrld;aul j¾Ol folkska iukaú; jk mßm:hls' 14.7 Ω Ndr m%;sfrdaOh ryd ,k Odrdj fidhkak'



8.ldrld;aul j¾Olhla iaùÉNhla f,i Ndú; Isú i`oyd fhod.;; yels mßm:hla 3'8 rEmfhys ±lafõ'  
( h ) hkq wdf,dal  
ixfõs m%;sfrdaOhls' tys m;sfrdaOh wdf,dalfha §  
200Ωo" w`ÿf¾ §130 Ωoh my  
( h ) u.ska wdf,dal  
úfudapl Èfhdavhla ±lafõ' m ;sodk  
fjda,aàh;djg ;sìh yels Wmßu wh" o( )= ±13 f,ii,lkak'



- 1fjda,aàh;dj fidhkak'
- m%;sfrdaOh w`ÿf¾ we;s úg yd wdf,dalfha we;s úg 2fjda,aàh;dj fidhkak'
- m%;sfrdaOh w`ÿf¾ we;s úg yd wdf,dalfha we;súg o What is the meaning of 'ys wh fidhkak'?
- "Èfhdavh ±,afjkafka" m%;sfrdaOh w`ÿf¾ we;s úg o" ke;aki wdf,dalfha we;s úg o@
- by; jk fldgfia ms<s;r = e jYfhka ,efnk wdf,dal ;ajhg m ;súreoaO wdf,dal ;ajhla we;s úg h ±,aùug kí" mßm:h flfia fjkia l< hq;= o@

9.3'9 rEmfha fmkajd we;af;a ldrld;aul j<sup>3/4</sup>Olhla fhodod ;ekQ ksh;

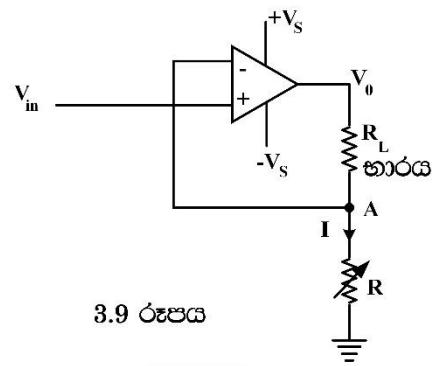
Odrd m%Njhls'

i. Ndrh yryd ,k Odrdj tys m%;sfrdaOfhka iajdh;a; nj  
fmkajkak'

ii. = 5 ki" Ndrh yryd1 Odrdjla,nd .ekSu

I'oyd úp,H m%;sfrdaOhg ;sìh hq;= wh .Kkh lrkak'

iii. = ±15 ki" wksl=;a rdYSka ksh;j we;s úg" i'oyd ;sìh yels Wmßu wh fidhkak'  
o( )= +13 f,i .kak'



10.Idrlid;aul j<sup>3/4</sup>OlhI újD; mqvq ,dNh" =  $1.2 \times 10^5 f\text{o}' \text{ m}$  ;sodk fjda,aàh;djg ;sìh yels Wmßu wh  
±12 fō ki" j<sup>3/4</sup>Olh f<sup>3/4</sup>Ch mrdihla ;=, ls%hd;aul ùu i'oyd wMJ<sup>3/4</sup>; fkdjk ( 1)

yd wMJ<sup>3/4</sup>; jk ( 2)m%odk w.% w;r fjda,aàh;d fjkig ;sìh yels Wmßu wh fidhkak'

11.3'10 rEmfhys ±lafjk mßmQ<sup>3/4</sup>K ldrld;aul j<sup>3/4</sup>OI mßm:hg

iemfhk m%odk fjda,aàh;dj = 0.5 fō' 1yd m%;sfrdaOI hq.,

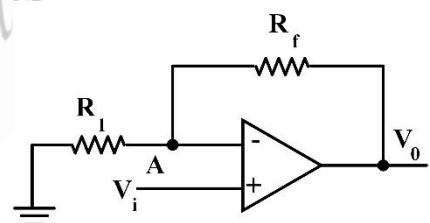
i'oyd my; ±lafjk w.hka we;s úg m%;os dk fjda,aàh;dj ( 0)  
fidhkak'

i.  $r_1 = 125 \Omega$ ,  $r_2 = 1 \Omega$

ii.  $r_1 = 220 \Omega$ ,  $r_2 = 47 \Omega$

iii.  $r_1 = 0.1$

iv.  $r_1 = 10$



12.mßmQ<sup>3/4</sup>K ldrld;aul j<sup>3/4</sup>Olhlska iEý wMJ<sup>3/4</sup>;k j<sup>3/4</sup>OI mßm:hla

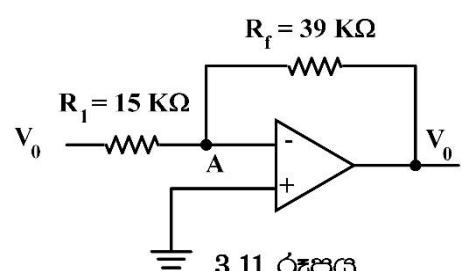
3'11 rEmfhys ±la fō'

i. = 120 jk ir, Odrd ( )"fjda,aàh;djla ki"

ii. = 0.5 ( )jk m%;Hdj<sup>3/4</sup>;l ix{djla ki"

iii. = -2.5 jk ir, Odrd ( )"fjda,aàh;djla ki"

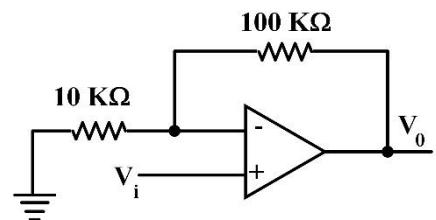
m%;sodk fjda,aàh;dj ofidhkak'



13.

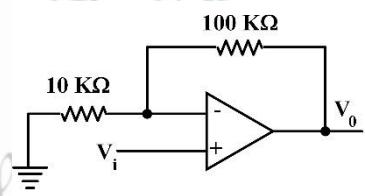
a.3'12 rEmfhys ±lafjkafka±15 iemhqī fjda,aàh;dm%Njhlg  
iïnkaO lr we;s ldrld;aul j¾Ol mßm:hls' fuu mßm:hì`oyd

- fjda,aàh;d ,dNh fidhkak'
- m%odkh = 100 jk ir, Odrd ( )fjda,aàh;djla  
ki" m%;sodk ( )fjda,aàh;dfjys wh fidhd Iy old,h iù. úp,kh jk wkaou o< igyka lrkak'
- "m%odkh"1.0 Wmßuhla iys; ihskdldr m%;Hdj¾;l fjda,aàh;d ;rx.hla ki" m%;sodk ( )fjda,aàh;d ;rx.fphys Wmßuh fidhd Iy old,h iù. úp,kh jk wdldr tlu mßudKhla u;  
o< igyka fldg fmkajkak'



3.12 දේපය

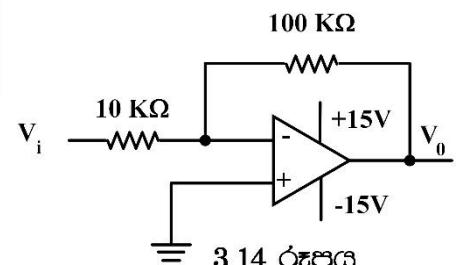
b.by; .eg,qfjys mßm:h" 3'13 rEmfhys ±lafjk mßÈ fjkia l<fyd;a ,  
yd fldgiaj,g ,efnk ms<s;=re fudkjdo@



3.13 දේපය

14.3'14 rEmfhys ±lafjkafka±15 iemhqī fjda,aàh;dm%Njhlg

- iïnkaO fldg we;s" wMJ¾;k j¾Olhls' o( )=  
±( - 3) f,ii,lkak'
- fuu j¾Olhys fjda,aàh;d ,dNh .Kkh lrkak'
  - I`oyd = 0.5 yd ixLHd;h1.0 jk ihskdldr  
fjda,aàh;djla m%odkh lr we;aki" tlu  
fjda,aàh;d ( )yd Id, ( )wlaI fhodod" m%odk fjda,aàh;djla" m%;sodk fjda,aàh;dj;a ld,h iù.  
úp,kh jk wkaou mßudK iys;j o< igyka lrkak'
  - m%;sodk fjda,aàh;djg ;sìh yels Wmßu w.hka fudkjdo@
  - = 2.0 ( )yd ixLHd;h1.0 jk ihskdldr fjda,aàh;djla m%odkh l<fyd;a"  
m%;sodk fjda,aàh;dj" ld,h iù. úp,kh jk wdldr fjk;a fjda,aàh;d ( ) -Id, ( ) wlaI fhodod o<  
igyka lrkak'



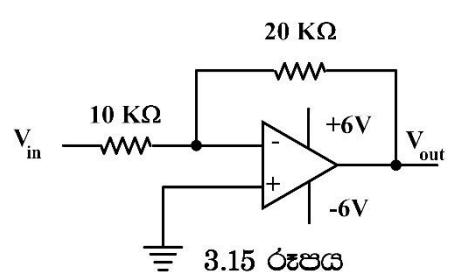
3.14 දේපය

15.3'15 jk rEmfhys ±lafjkafka = ±6 fjda,aàh;d iemhqulg

iïnkaO fldg we;s wMJ¾;k j¾Olhls'

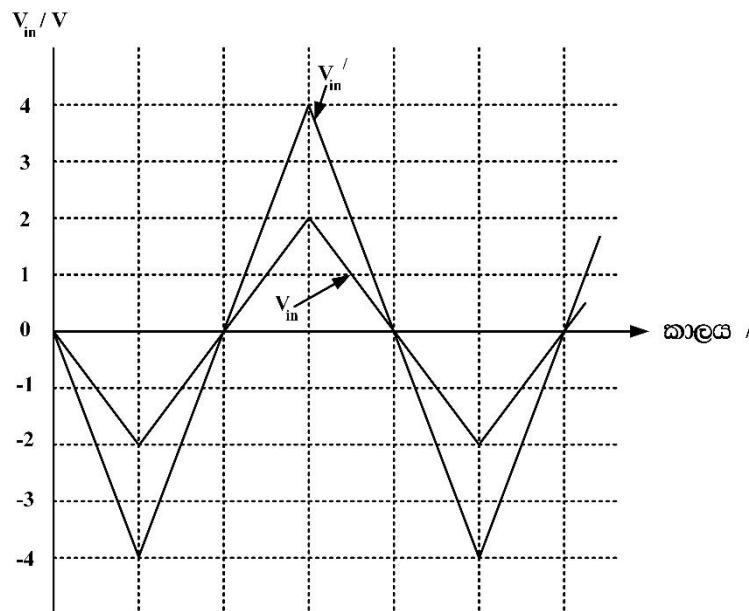
o( )= ±( - 1.2) fō'

- m%odk fjda,aàh;dj w& = +2.0 jk úg" wd& = 2.0 jk  
úg m%;sodk fjda,aàh;dj .Kkh lrkak'



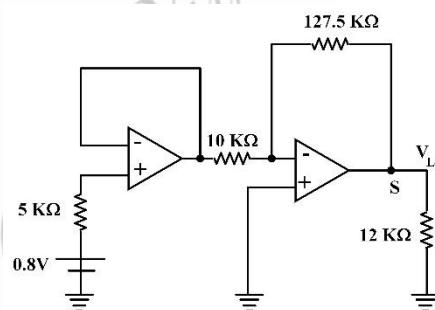
3.15 දේපය

- ii. m%odk fjda,aàh;dj w& = +4.0 jk úg" wd& = -4.0 jk úg m%;os dk fjda,aàh;dj . Kkh Irkak'
- iii. Id,h;a iù. my; 3'16 rEmfha wkaoug úp,kh jk yd 1 fida,aàh;d folla fjk fiju m%odkh l<sup>l</sup>fyd;a" ,efnk m%;sodk fjda,aàh;d ( o)Id,h iù. úp,kh jk wkaou" fuu rEmh msgm;a fldg ta u; u o< igyka Irkak'



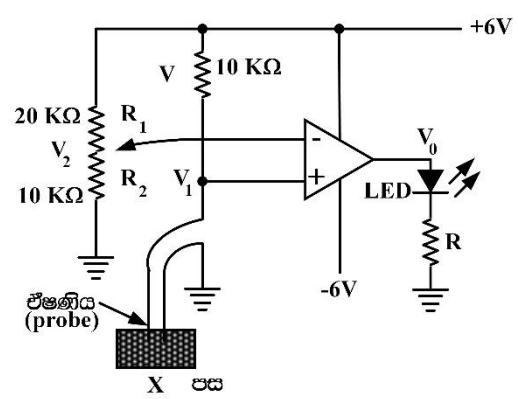
3.16 උපය

16.3'17 rEmfha ±lafjkafka mßmQ¾K ldrld;aul j¾Ol folkska iukaú; jk mßm:hls'12 ΩNdr m%;sfrdaOlh yryd fjda,aàh;d neiau ( )fidhkak'



3.17 උපය

17.3'18 rEmfha ±lafjkafka mfiys f;;ukh uekSu i`oyd ldrld;aul j¾Olhla fhodod ie,iqí l< mßm:hls' mfiys ia:dk folla w;r úoHq;am%;sfrdaOh" tu ia:dkfhys mfiys f;;ukh uekSu i`oyd ldrld;aul j¾Olhla fhodod ie,iqí l< mßm:hls' mfiys ia:dk folla w;r úoHq;am%;sfrdaOh" w.hlg jvd wvq jQ úg t;ek m%;sfrdaOh jeäuu ksid wdf,dal úfudapl Èfhdavh ( )±,afjk mßÈ fuu mßm:fphys 1yd 2 mk%;sfrdaO w;r wkqmd;h ilid we;' mfiys m%;sfrdaOh ù.ska olajd we;' mfiys f;;ukh hï m%udKhlg



3.18 උපය

jvd jeä jQ úg ys wh200Ωf,io mi úh<s kī ys wh20 Ωf,io .kak' iemhqī úNjh = ±6 fō' o( )= ±( -

1.2) I'm sorry.

- mi f;;aj we;s úg" tkī =  $200\Omega_{jk} \text{ úg}'' + m\%_{odk} w.\%_h f_j; fhfok \text{ fjda,aàh;dj fidhkak}'$
- mi úh<sj we;s úg" tkī" =  $20 \Omega_{jk} \text{ úg}'' + m\%_{odk} w.\%_h f_j; fhfok \text{ fjda,aàh;dj fidhkak}'$
- 1yd 2m%;sfrdaOl fol wvx.= fjda,aàh;d Ndclh ù.ska - m%\_{odk} w.\%\_h f\_j; fhfok 2  
fjda,aàh;dj fidhkak'
- a.mfiys f;;ukh we;s úg yd  
b.mi úh<sj we;s úg m%;sodk fjda,aàh;dj fidhkak'
- Èfhdavh ±,afjkafka by; ( )wjia:d foflka ljr wjia:dfō ſ o@



#### 4' ;d¾lsI oajdr wdYs%; .eg,q

1.oYuh 13 ixLHdj" oaúuh ixLHdjla njg yrjkak'

2.11021oaúuh ixLHdj" oYuh ixLHdjla njg yrjkak'

3.oYuh 248 ixLHdj" oaúuh - fla;l - oYu ( - )wxlkfhka ,shkak'

4.oaúuh - fla;l - oYu ( - )wxlkfhka olajd we;s my; i'oyka ixLHdj oYuh wdldrhg ,shd olajkak'

5. = + ( . )hk nQ,Sh úc m%ldYkh fufyhùu i'oyd ;d¾lsI oajdr follska hq;a mßm:hla ie,iqí  
Irkak' ta i'oyd i;H;d j.=jo fokak'

6. = ( + ).( . )d¾lsI m%ldYkh fufyhùu i'oyd uQ,sl oajdr weiqbka ixLHdxl mßm:hla ks¾udKh  
Irkak'

7. ( + ).( . ) = ⊕ nj fmkajd" fuu nQ,Sh ùc m%ldYkh fufyhùu i'oyd ;d¾lsI oajdr ;=klska iukaú;  
mßm:hla f.dvk.kak'

8.j.=fō ±lafjk i;H;d j.=j ;d¾lsI m%ldYkhI wdldrhg olajd th ls%hd;aul lsÍu i'oyd mßm:hla  
ks¾udKh Irkak'

A	B	C	R
0	0	0	0
0	0	1	1

0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	0

9.357" 68 iy 72 hk oYuh ixLHd iul oaúuh ixLHd njg yrjkak'



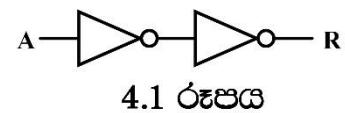
10.1011" 11010" 1110111 hk oaúuh ixLHd iul oYuh ixLHd njg yrjkak'

11.my; iòyka oYuh ixLHd oaúuh - fla;l - oYu ( )wxlkfhka ,shkak' 166" 519" 211" 4132

12.oaúuh - fla;l - oYu ( )wxlkfhka olajd we;s my; i`oyka ixLHd oYuh wdldrhg ,shd olajkak'

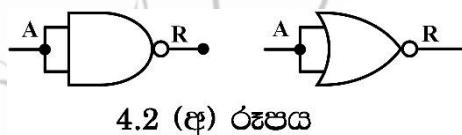
1001 0011 0101 1000 0111 0001 0101 1001 0110 0110 1001 1000

13.4'1 rEmfha iòyka mßm:fha m%;sodkh ,nd .kak'

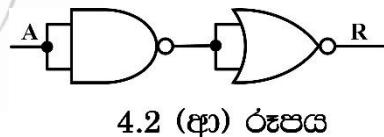


14.

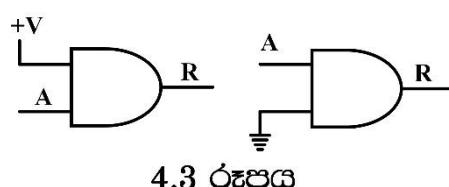
i. 4'2 ^w& rEmfha olajd we;s mßm;j, m%;os dkh" m%odkfha wkqmQrlh nj fmkajkak'



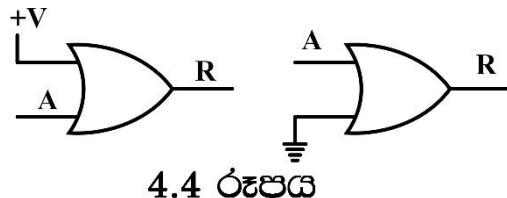
ii. 4'2 ^wd& rEmfha iòyka mßm:fha m%;sodkh ,nd.kak'



15.4'3 rEmfha fmkajd we;s oajdr mßm;j, m%odkh úp,Hhls' N+.; lr we;sm%odkfha ;d¾ls| wh 0 jk w;r + úNjfha we;sm%odkfha ;d¾ls| wh 1 fõ' m%;sodkh iòyka lrkak'



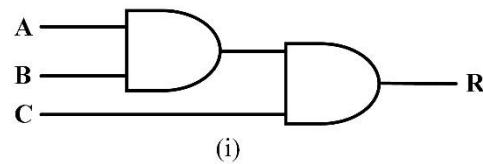
16.4'4 rEmfha olajd we;s oajdr mßm;j, m%;sodk iòyka lrkak'



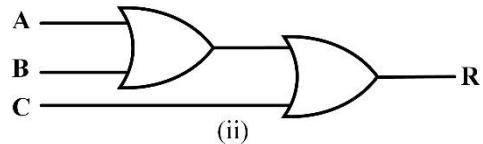
4.4 උෂපය

17.  $\oplus$  Iy  $\oplus$  ys w.hhka fidhkak'

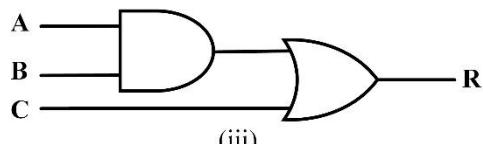
18.4'5 rEmfha olajd we;s mßm;j, m%;sodkh iòyd nQ,sh m%ldYk ,shkak'



(i)



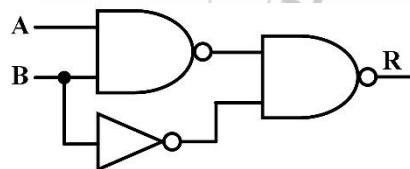
(ii)



(iii)

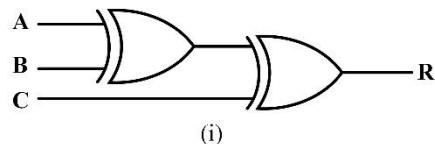
4.5 උෂපය

19.4'6 rEmfha fmkajd we;s mßm:hi`oyd i;H;d j.=,nd .kak' tys m%;sodkh ir, nQ,Sh m%ldYkhla f,i olajkak'

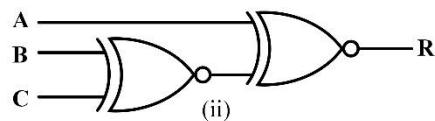


4.6 උෂපය

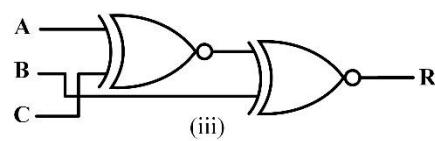
20.4'7 rEmfha i`oyka mßm: i`oyd i;H;d j.=,nd.kak' t khska" ( $\oplus$ ) $\oplus$  =  $\oplus$ ( $\oplus$ ) = ( $\oplus$ ) $\oplus$  =  $\oplus$  $\oplus$  nj fmkajkak'



(i)



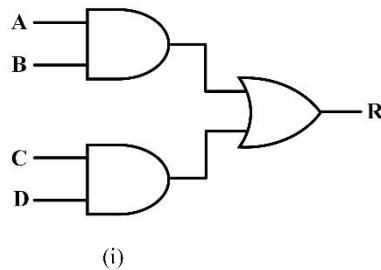
(ii)



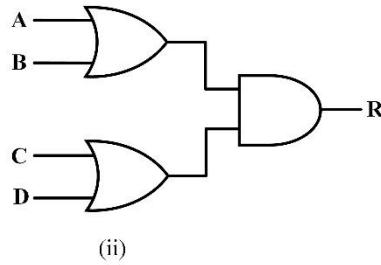
(iii)

4.7 උෂපය

21.4'8 rEmfha ±lafjk mßm:j, m%;sodk i`oyd nQ,Sh m%ldYk ,nd .kak'



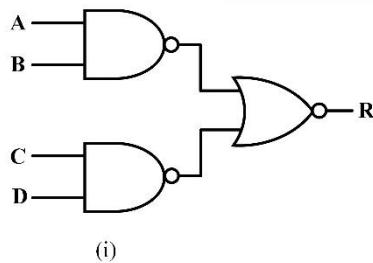
(i)



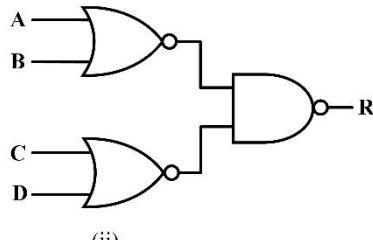
(ii)

#### 4.8 දෙපය

22.4'9 rEmfha ±lafjk mßm: i`oyd i;H;d j.= ,nd.kak' t khska tu mßm:j, m%;sM, i`oyd nQ,Sh m%ldYk ,shkak'



(i)

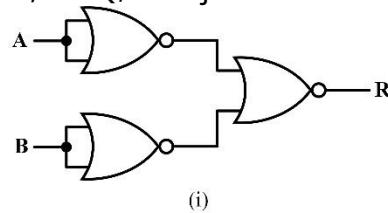


(ii)

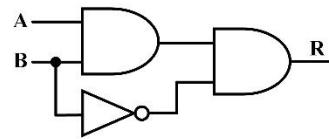
#### 4.9 දෙපය

23.i;H;d j.= Ndú; Ir 4'10 rEmfhys olajd we;s mßm:j, m%;sodkh iòyd nQ,Sh m%ldYk ,nd.kak'

4'10 rEmfhys m%;sM,h Ndú; Ir nQ,Sh i³joduHhla f.dvkk.kak'



(i)

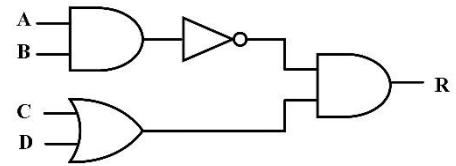


(ii)

#### 4.10 දෙපය

24.4'11 rEmfha fmka jd we;s mßm:h oajdrhl g ;=H nj

- i;H;d j.=j ù.ska iy
- nQ,Sh ùc .Ks;h wei qßka fmka jkak'



4.11 දෙපය

25.my; iòyka .eg,q úi`šu iòyd ä-fuda.ka m%fihh fhodod .kak'

- m%odk follska hq;a oajdr Ndú; lr oajdrhla idod .ekSu'
- m%odk follska hq;a oajdr Ndú; lr oajdrhla idod .ekSu'

26.i;H;d j.= Ndú; lr my; iòyka nQ,Sh i¾j iduHhkaf.ai;H;dj wdo¾Ykh Irkak'

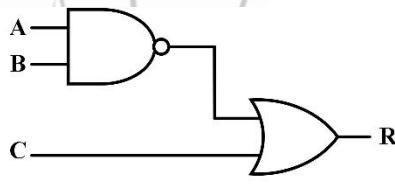
- ( + ).( + ) = .( . )
- .( + ) =
- .( + ) = . + .
- + = +



27.i;H;d j.= Ndú; lr my; i`oyka m%ldYkj, i;H;dj fmka jkak' fuu m%ldYj,ska ±lafjkafka úp,Hhka folia i`oyd ä - fuda.ka m%fihh hs&

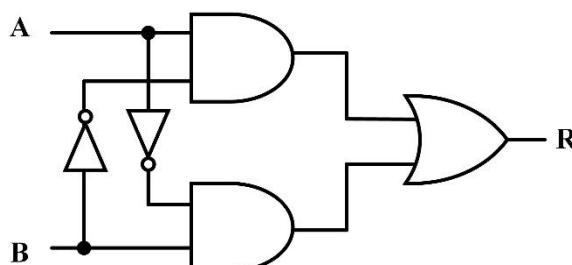
- ?? = ?? + ??
- ?? + = ??

28.4'12 rEmfha fmka jd we;s mßm:fha fufyhqu oajdr muKla Ndú; lr ls%hd;aul l< yels mßm:hla ks¾udKh Irkak' ^b.sh( ä-fuda.ka m%fihh Ndú; Irkak'&



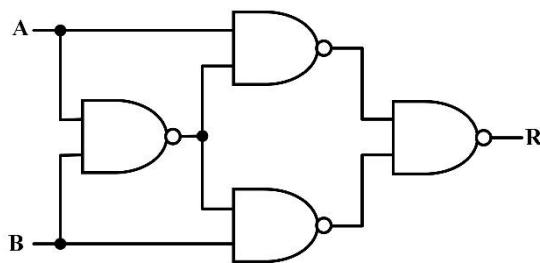
4.12 දෙපය

29.4'13 rEmfha fmka jd we;s mßm:hi`oyd i;H;d j.=j ,nd .kak' t khska mßm:fha m%;sodkh i`oyd nQ,Sh m%ldYkhla ,shkak' fuu mßm:fhka isÿjk ld¾hh jpkfnka úia;r Irkafka flfia o@



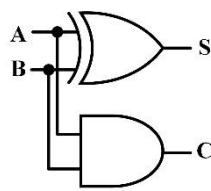
4.13 දෙපය

30.4'14 rEmfha fmkajd we;s mßm:h úYaf,aIKh lrkak'



4.14 උපය

31.4'15 rEmfha fmkajd we;s mßm:fha m%;os dk i`oyd i;H;d j.=j ,nd.kak' t khska fuu mßm:h oaúuh wxl foll ftlHh ,nd .ekSu iòyd Ndú; l< yeks nj fmkajkak' ^fuu mßm:h oaúuh w¾O wdl,lh (h )kñka yèÈkafõ'&



4.15 උපය

32.my; iòyka nQ,Sh m%ldYk ls%hd;aul lsÍu iòyd wjYH jk mßm: ks¾udKh lrkak'

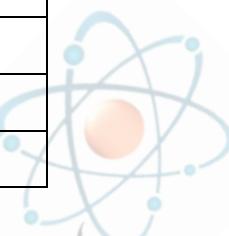
- i.  $= ( + )$ .
- ii.  $= . +$

33.my; j.=fjka ±lafjk i;H;d j.=j ls%hd;aul lsÍu iòyd mßm:hla ks¾udKh lrkak'

A	B	C	R
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

34.my; j.=fjka ±lafjk i;H;d j.=j ls%hd;aul lsÍu i`oyd tla oajdr j¾.hlska muKla iukaú; mßm:hla ks¾udKh Irkak'

A	B	C	R
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0



35.my; j.=fjka ±lafjk i;H;d j.=j ls%hd;aul lsÍu i`oyd tla oajdrhlska muKla iukaú; mßm:hla ks¾udKh Irkak'

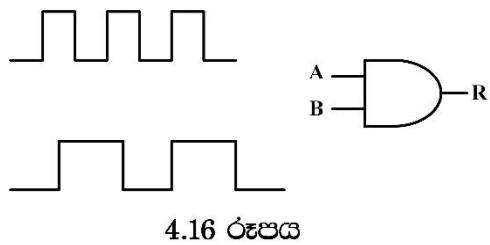
A	B	C	R
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	1

36.fudag¾ r:hl bÈßmi fodrj,a folg fjk fjku fylir we;s ixfool ( )folla ù.ska tu fodrj,a fyð Ëka jeiS we;s úg wh ;¾l 1 jQ ix{djla ksl=a lrhs' fodrj,a tlla fyda fyð Ëka jeiS fkdue;s wjia:dj, ta nj ßhÿreg ±kaùu i`oyd nirlha ( )ls%hd;aul l< hq;= j we;' nirlh ls%hd;aul úh hq;f  
a;a fudag¾ r:fha iaúÉÑh oud we;s úg muKs' nirlh ls%hd;aul lrùu i`oyd ;¾lk mßm:hla ks¾udKh Irkak' ta i`oyd mßm:fha m%;sodkh ;¾l 1 úh hq;= nj i,lkak'

37.mÍlaIKd.drhl we;=< WIaK;ajh tla;rd mrdihl ( 1Iy 2, 2> 1)mj;ajd .ekSug wjYH ù we;' ta i`oyd ;dmlhla iy isis,lhla tys ;nd we;sw;r ;d¾lsl wh 1 jQ ix{djla ù.ska tajd ls%hd;aul l< yelsh' WIaK;ajh ksÍlaIKh lsÍu i`oyd ixfool folla o ldurfha ;nd we; ldurfha WIaK;ajh tla tla ixfoolfha ksÍlaIK WIaK;ajhg ( 1g fyda 2g) jvd jeä jQ úg wod< ixfoolh ù.ska wh 1 jQ ;d¾lsl ix{djla ksl=a lrhs' fuu ix{dm%odk f,i fhodod . ksñka moaO;sh iajhxLS%hj ls%hd;aul lsÍu iòyd iqÿiq ;d¾lsl mßm:hla ks¾udKh Irkak'

38.úp,H oaúuh wxl foll ( , )iudk wiudk;dj ks¾Kh lsíu i`oyd mßm:hla ks¾udKh lrkak' fuu  
 mßm:h §¾> Ir oaúuh - fla;l - oYu wxlkfhka ( )"Olajk,o wxl foll" 3 2 1 0  
 yd 3 2 1 0iudk wiudk;dj ks¾Kh lsíu iòyd mßm:hla ks¾udKh lrkak'

39.4'16 rEmfha fmkajd we;s fldgq ;rx." oajdrfha Iy m%odk i`oyd fhod .;a úg m%odkj,g  
 idfmalaIj m%;sodkfha wdldrh rEm igykl fmkajkak' fldgq ;rx.j, WÉp w.hfhka ;¾l 1 o wjp  
 w.hfhka ;¾l 0 o ksrEmKh jk nj i,lkak'



4.16 උපය